THE

HISTORY, ANTIQUITIES, TOPOGRAPHY, AND STATISTICS

OF

EASTERN INDIA;

COMPRISING THE DISTRICTS OF

BEHAR, SHAHABAD, BHAGULPOOR, GORUCKPOOR, DINAJEPOOR, PURANIYA, RUNGPOOR, & ASSAM,

IN RELATION TO THEIR

GEOLOGY, MINERALOGY, BOTANY, AGRICULTURE, COMMERCE, MANUFACTURES, FINE ARTS, POPULATION, RELIGION, EDUCATION, STATISTICS, ETC.

SURVEYED UNDER THE ORDERS OF THE SUPREME GOVERNMENT,

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BY

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AUTHOR OF THE "*History of the British Colonies,*" &c.

IN THREE VOLUMES.

VOL. II.

BHAGULPOOR, GORUCKPOOR, AND DINAJEPOOR.

LONDON:

Wm. H. ALLEN AND Co. LEADENHALL-STREET.

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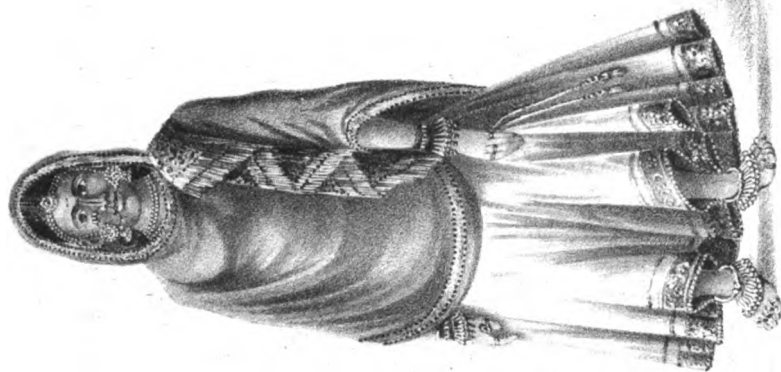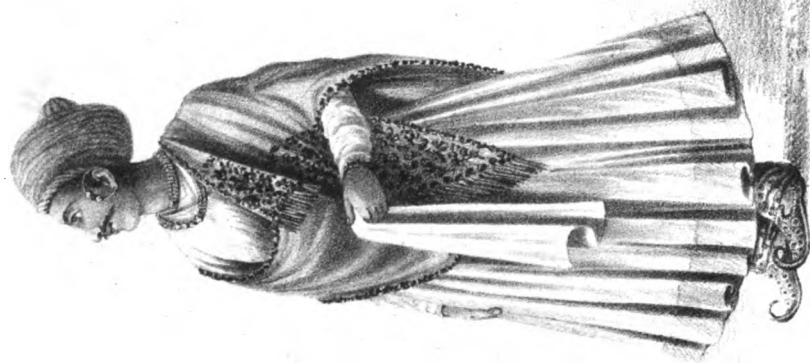
HINDOOS OF HIGH RANK IN FULL WINTER DRESS.

London. 1838 W. H. Allen & Co. 7 Leadenhall Street

INTRODUCTION.

The present volume of the official survey of "Eastern India" includes the Zilahs or districts of Bhagulpoor, Goruckpoor (northward division) and Dinajepoor. The particulars given of the social state of the numerous inhabitants of these fertile and important Provinces are equally, if not more valuable and interesting with those detailed in the preceding volume. There may be some individuals who cannot appreciate the merit of the minutiæ which this survey presents, but the philosophic mind will arrive at juster conclusions respecting the character and condition of the people by means of this very minute specification, than by any other mode of ratiocination. The merchant and the capitalist will be also the better enabled to judge of the capability of the country for the speculations of commerce, and the employment of capital [in particular see Dinajepoor Appendix for the monthly household expenditure of families of different ranks]—and dependent as the proprietors of the East India Company now are for their dividends on the territorial revenue of India, the circumstantial account of the rent, tenure and produce of land—and the management of public and private estates, will prove of inestimable value. Since the appearance of the preceding volume, many old Anglo-Indians have declared that this survey has presented them with a clearer view of the actual frame-work and anatomy of society in the East, than any thing they saw or heard during their sojourn

in Hindostan. The famine now devastating the Upper Provinces of the Bengal Presidency, gives an additional, painful interest to the details which this survey presents of the physical condition of the people.

The desire to preserve as many details as possible relative to the landed tenures and the cultivation of private estates in Bengal and Behar, has added considerably to the size of the volume, while at the same time its intrinsic worth has been much augmented.

The ensuing volume, which concludes the survey, will contain the Zilahs or districts of Purańiya, Rungpoor and Assam.

REFERENCES TO ILLUSTRATIONS IN THIS VOLUME.

MOSLEMS OF HIGH RANK IN FULL WINTER DRESS.

London. 1838. W. H. Allen & Co. 7 Leadenhall St.

J. Netherclift [illegible]

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STATISTICAL VIEW OF THE DISTRICTS OF BHAGULPOOR, GORUCKPOOR, AND DINAJEPOOR.

(*Prepared from the Survey.*)

	Number.	Division or Thanah.	Area in square miles.	Population.			No. of Houses.	Exempt from Floods.		Value of Landed produce, Sicca Rupees.	Commerce.		
				Moslems.	Hindoos.	Total.		Clay Land, square miles.	Free Soil, square miles.		Exports, Sicca Rupees.	Imports, Sicca Rupees.	Total in Sicca Rupees.
Bhagulpoor.	1	Kotwali	92	37125	61875	99000	15914	46	29	512983	408500	345200	753700
	2	Ratnagunj	312	52900	158700	211600	42685	114	175	1582508	50500	11750	62250
	3	Kodwar	167	20200	44300	64500	9815	52	26	590653	51250	6000	57250
	4	Lokmanpoor	481	39600	87100	126700	21579	39	89	1939656	315760	134795	450555
	5	Gogri	788	28200	122300	150500	23395	62	143	2311469	138900	38900	177800
	6	Kangwargunj	92	5600	16900	22500	3293	12	2	196294	45040	4400	49440
	7	Mungger	113	11400	33900	45300	6873	24	9	480402	522700	578880	1101580
	8	Suryagarha	103	12375	27225	39600	5950	22	2	420661	204850	101850	306700
	9	Mallepoor	697	9750	146250	156000	17689	404	90	1202907	30900	9700	40600
	10	Tarapoor	643	44900	134900	179600	24733	387	70	1674299	1000	..	1000
	11	Bangka	997	54000	172000	226000	41188	50	780	2124065	27100	19975	47075
	12	Fayezullahgunj	256	12700	76300	89000	13968	145	70	631772	43400	20800	64200
	13	Paingti	56	2100	6200	8300	1416	18	4	119146	13610	2855	16465
	14	Rajmahal	267	54050	54050	108100	20983	90	30	790159	143500	241600	385100
	15	Phutkipoor	32	3200	10000	13200	2046	2	4	109117	24550	4600	29150
	16	Furrokhabad	72	5900	17700	23600	4843	13	2	258011	57050	17275	74325
	17	Pratapgunj	122	23000	38500	61500	11580	7	26	681891	212100	51950	264050
	18	Auruggabad	120	16700	28000	44700	7809	34	..	501436	89400	59215	148615
	19	Kalikapoor	310	26000	26000	52000	10397	260	..	740347	57350	26460	83810
	20	Lakardewani	919	300	239700	240000	47089	241	500	1924377	65350	12245	77595
	21	N. Mountaineers	920	..	38000	38000	..	50	30	..	..	..	..
	22	S. Mountaineers	666	..	20000	20000	..	150	100	..	..	..	..
		Total	8225	460000	1559900	2019900	333245	2222	2181	18792162	2502810	1688450	4191260
Gorukhpoor.	1	Gorukhpoor	4	1974	4147	6121	The No. of Houses are omitted in the tables for these Districts.	1	3	..	601444	305767	907211
	2	Mansurgunj	812	307	23572	23879		..	700	883445	32850	11720	44570
	3	Parraona	546	2067	18299	20366		..	427	784222	164721	94628	259349
	4	Keseya	129	347	7859	8206		..	117	299763	12473	18818	31291
	5	Belawa [hauli	113	438	5203	5641		22	71	226664	2050	2718	4768
	6	Selempoor Maj-	296	629	12869	13498		20	218	311795	56008	6010	62018
	7	Bhagulpoor	168	202	15495	15697		..	97	410457	76600	8121	84721
	8	Barahalgunj	128	118	10690	10808		28	81	331811	7694	25555	33249
	9	Gajpoor	336	510	11358	11868		121	80	448954	54814	6612	61426
	10	Bhewopar	81	98	7252	7350		1	33	170285	29120	23066	52186
	11	Onaula	104	78	3765	3843		60	17	124693	8200	10	8210
	12	Gopalpoor	327	321	9142	9463		109	78	433918	119206	40803	160009
	13	Sanichara	374	596	16586	17182		162	127	693424	22102	17818	39920
	14	Mauhuyadabar	212	693	9533	10226		52	105	575831	35138	18800	53938
	15	Khamariya	225	656	19539	20195		81	58	685345	336312	241798	578110
	16	Vazirgunj	210	285	6983	7268		71	84	706777	81311	23601	104912
	17	Nawabgunj	1	493	566	1059		..	1	..	188568	181668	370236
	18	Manikapoor	110	138	7688	7826		55	27	321890	4250	3679	7929
	19	Lalgunj	63	305	4974	5279		23	25	144194	450	2561	3011
	20	Dumariyagunj	326	3262	12639	15901		187	72	756490	10650	24912	35562
	21	Basti	208	1172	6113	7285		76	52	382444	57806	41573	99379
	22	Magahar	360	3329	9731	13060		179	76	782079	108121	87118	195239
	23	Bakhira	46	195	1948	2143		12	5	88789	11157	19873	31030
	24	Bangsi	687	195	17970	18165		225	137	672963	104768	62535	167303
	25	Dhuliyachandar	130	1	2	3		96	..	..	..	..	..
	26	Lotan	253	92	6537	6629		49	107	208702	2887	5389	8276
	27	Pali	552	1	213	214		..	336	135272	2620	1856	4476
	28	Nichlaul	622	384	5851	6235		..	430	853975	12126	15431	27557
		Total	7423	20575	256524	277099		1630	3524	11434195	2143446	129244	2272690
		District of Dinajepoor. Total	5374	2100000	900000	3000000		1970	1615	19960000	4819360	1285900	6105260

HISTORY, TOPOGRAPHY, ANTIQUITIES, &c.

OF

EASTERN INDIA.

BOOK I.

DISTRICT OF BHAGULPOOR.

CHAPTER I.

AREA, TOPOGRAPHY, RIVERS, LAKES AND MARSHES, METEOROLOGY, &c.

This district occupies the S. E. corner of the Mogul province of Behar, together with a small portion of Bengal; but would appear at one time to have been entirely included within the Muhammedan kingdom of the latter name. Its greatest length, from the boundary of Virbhum on the Dwarka to that of Tirahut on the Tilawe, is about 133 miles in a N.N.W. and S.S.E. direction; and its greatest breadth, crossing the above line at right angles, from Rajmahal to the boundary of Virbhum near Chandan, is about 80 miles. According to Major Rennell its southern extremity, at Chandrapur on the Dwarka river, is in 24° 4′ N.; and its northern extremity, on the Tilawe, extends to 25° 49′ N. Its eastern extremity on the Ganges near Gaur is 15′ W. from the meridian of Calcutta; and on the hills of Gidhaur it extends about 2° W.

By tracing the boundaries, so far as they could be ascertained on the map of Major Rennell, it contains about 8224 square British miles; but the extent cannot in this manner be ascertained with much precision; for in the whole district there are very few boundaries that are tolerably well defined. Every proprietor of land alleges, that his boundary extends farther than his neighbour in that direction will allow; and

as the whole boundaries of the jurisdiction have been fixed by the extent of certain properties, and not by any great lines marked by nature, the whole outline of the district is uncertain, except where decisions of the courts of law have determined the disputed parts.

SOIL is varied; but the parts fit for the plough seem uncommonly rich, and want only pains to become highly productive. A very considerable extent is occupied by mere rock, totally incapable of cultivation; and this is the case not only on the hills, but in a few places on the plains. A much greater extent is covered with fragments of rock of various sizes. On the hills these fragments are so large and numerous, that, could the plough be used on account of the declivity, the nature of the soil would render its use impracticable: yet in many parts such a soil is very far from being barren, and such alone is the land cultivated by the mountaineers of Rajmahal. In their fields fully a half seems to consist of angular masses of rock, from six inches usually to one foot in diameter, and yet their crops of cotton and arahar (pulse) equal any seen on the plains.

There is also a considerable extent of land, in which, mixed with a good soil, there are many small fragments of stone, of a size that does not impede the plough. In some parts these are considered as rendering the soil useless; but in others, land containing these small stones, is preferred for crops raised during the rainy season. The stones preserve the soil cool and moist, and encourage vegetation. The extent of poor, sandy or gravelly soil is much smaller than in Puraniya. Near the banks of the Ganges some land is overwhelmed with sand deposited from the inundations, and is called *Balubord*. It is considered as totally useless, at least in the western parts, and there the indigo planters have not discovered the advantage of sowing their plant on such land. Near the Ganges is a very light sandy soil, but still capable of cultivation. Near some smaller rivers, which inundate their banks, is some very poor land called *Usari*, which has a thin soil over a sharp dry sand. This land is too deeply inundated to yield any thing during the rainy season, and, during the dry, is too suddenly scorched to bring a crop to maturity. Even the grass, which shoots as the floods retire, is soon withered, and becomes useless either for thatch or

pasture. The extent of such is small. It is very different from the high sandy lands of Puraniya, which in the rainy season give tolerable pasture, and with manure, would give crops of grain. Near the Ganges a thin, poor land over sand gives light winter crops of pulse and linseed.

The soil in some few parts contains so much coarse sand and gravel, that it is unfit for the plough; but yields trees, and might be employed in plantations for rearing Tasar and Lac. Among the circumstances in some places alleged to render the soil totally useless, are calcareous nodules (ghanggat) mixed in the earth, and an efflorescence of soda from its surface. In some places these calcareous nodules cover the whole surface, and there not a pile of grass is to be seen; but the whole extent of such is very inconsiderable; and where the nodules are imbedded in a soil of red clay, and placed some way under the surface, they are far from doing harm. I have indeed observed no lands more productive in the district, even in the same vicinity, where it was alleged that they rendered the land totally useless, as at Bhagulpoor. The land impregnated with soda is of a very small extent; and in one place I saw it under crops of a very tolerable quality. Land of a red soil composes a great part of this district. In some parts it is mixed with so much sand as to constitute a free soil; but in general it is a stiff clay, and without artificial watering it cannot be cultivated, except in the rainy season; but it is very productive of such grains as can then be sown; and, when artificially watered, as in the gardens near Munggeer, it becomes by far the most valuable land in the district. The good land of an ash colour in the interior of the country is mostly clay, with more or less intermixture of sand; and towards the boundary of Tirahut, especially, there is much of a very light colour, approaching, when dry, to white, as in Dinajpoor. This is stiff; but in most places the soil of this colour is rather free; although in general it cannot be cultivated for winter crops without a few waterings. In some places of the interior the soil is of rather a peculiar nature, which, from its colour resembling that of an ass, is called *Kharawa*. This contains a very considerable portion of sand; but, when dry, it is very hard; and, when under water, as in worn down paths, the sand and clay separate, the former coming to the surface. On the move-

able banks of the Ganges again, where there is no red soil, there is much of a rich blackish clay; during the inundation it is so soaked, that it does not require to be watered to enable the farmer to cultivate it in winter. There is also a great deal of a rich, free, dark ash coloured soil.

Elevation.—Bhagulpoor is a hilly district: the hills in very few parts compose regular chains of considerable length; in most places there are passages at very short intervals, through which a traveller might pass without any considerable ascent; but in the hilly parts these passages have been avoided. In the great cluster near Rajmahal the hills themselves, notwithstanding the ruggedness of their soil, are tolerably well occupied, considering the manner in which they are cultivated, as it requires long fallows. Many however of these hills are waste, and the number of people might be considerably augmented.

The other clusters of hills are entirely waste, nor has the smallest attempt been made to introduce among them the use of the hoe. These hills are undoubtedly more rugged than those towards Rajmahal, and more vast masses of rock occupy their surface; they are of a primary formation, while the hills of Rajmahal are secondary, and some of them perhaps volcanic. The whole of these clusters, and even the hills of Rajmahal compose, in the opinion of the natives, a part of the Vindhyan mountains, which extend from the south banks of the Ganges to near Cape Comorin. In fact the natives consider the vast plain of Hindustan, forming the centre of their world, as bounded by four mountains. That on the south has been already mentioned. On the north is Himayachal, or the Emodus of our ancients. On the east is Udayachal, the mountains of Ava, unknown, I believe, to the ancients. On the west is Astachal, the Parapamisus of ancient geographers, which separates India from Persia. Besides the more remarkable clusters of hills, there are many smaller ones, and many detached peaks, which often spring suddenly from the most level parts of the country, and sometimes from the bed of the Ganges; but in general there is a considerable extent of swelling ground near the hills, and most of the interior of the country is of this nature, although the swelling ground, and even the hills, in some parts, approach to the very bank of the Ganges.

RIVERS.—*The Ganges.*—Above Mungger* the great sacred river of the Hindus forms the boundary between this district and that of Tirahut for about thirty miles. In the time of Major Rennell, at the western extremity of this line, there was a large island in the river, the southern arm of which received the Kiyul river. This arm having become dry, the island is now conjoined to the southern shore; but a small channel remains, which conveys the water of the Kiyul to Suryagarha, and is called by that name. From Suryagarha, a place of considerable trade, the river runs about 11 miles with a very wide uninterrupted channel to the boundary of division Mungger. At the boundary of the division of Suryagarha the Ganges divides into two arms, which surround a long winding island, extending to Mungger, and giving rise to numerous disputes among the proprietors, and native officers of police of the two districts. In the time of Major Rennell there were in this space several small islands which have now united into the one above mentioned, although this is still intersected by several small channels.

From Mungger, a place of great trade, to Patharghat, the Ganges has this district on both sides for almost 60 miles. Immediately below Mungger the river, since the time of Major Rennell, has encroached much on both banks, especially towards Sitakunda, and has formed in its channel some very large islands, the property of some of which is keenly disputed by sundry persons. In many parts of this course the right bank of the river is rocky, so that it can make no farther encroachments. The channel between Sitakunda and the islands is smaller than that on the west, and in some years has been fordable. Opposite to the lower of these islands a branch of great length separates from the left bank of the Ganges, which it rejoins far below. It passes east for about 13 miles through the division of Gogri, where it is called Baharkhal. It then takes a large sweep north to reach Bihipur, a place of some trade, passing by Madhurapur, where there is some commerce. At both these places it is called merely a branch of the Ganges, and in fact this part of it, in the time of Major Rennell's survey, was the northern side of a large channel of the Ganges, which then passed Bihipur (Behpour R.) This channel is navigable in the

* Now written Monghir.

floods; but in many parts becomes quite dry during the fair season. From Bihipur it passes south about six miles to Sibgunj, a place of considerable trade, where it is called the Kalbaliya, but is navigable in the rainy season alone. It rejoins the river about five miles below.

The southern side of the same channel of the Ganges, in the time of Major Rennell passed Bihipur, but now forms a branch called Ganggacharan, which runs within the former, and on which agriculture is making rapid encroachments. Below the islands and Sitakunda we have, for about 14 miles, a very uninterrupted channel, about a mile wide, but in the dry season one half, or perhaps more, is a white glittering sand. This is chiefly on the northern and convex bank, which is low, while the water keeps near the south bank, which is a high red clay filled with calcareous nodules, strongly resisting the encroachments of the river. At the end of this uninterrupted space, towards the east, is a vast rock of granite surrounded entirely by the stream, with another adjacent to the southern bank. Both have been long dedicated to the various superstitions, which in succession have influenced the people, and the singularity of the situation still excites the devotion of multitudes. At this place is Sultangunj, a place of some trade. Below this, in the time of Major Rennell, a branch of the river took a sweep to the north, forming a large island; but this branch in the dry season is now stagnant, and in most places cultivated; while the small island, laid down by our geographer south from the larger, has now grown much larger, and has on its northern side the chief branch of the river. This island is now a subject of dispute between the people of the divisions of Lokmanpur and Kumurgunj.

Opposite to this, as in the time of Major Rennell, and extending towards Kahalgang, is a channel of the Ganges, which is called Yamuniya or Jaoniya. Very considerable changes have however taken place on these parts since the time of that distinguished geographer. The channel in its upper part has contracted very much, and has been broken off by the branch of the river, which surrounds the disputed island; while its lower has been very considerably enlarged, and is navigable throughout the year. Its channel however is again interrupted by the great river, which has carried away the islands opposite to Barari (Berraddy R.), in lieu of

which a part added to the northern bank is now claimed by the people of the Kotwali division. Still farther the river has worn away a great part of the northern bank, and has greatly enlarged the width of the lower part of the island between the Yamuniya and Ganges. The length of this island, towards the east, has however been very much curtailed, and three immense rocks of granite, north from Kahalgang, which in the time of Major Rennell were included in this island, are now in the middle of the river, forming one of the most picturesque scenes that I have ever seen. From these rocks to Patharghat the river sweeps some rocky hills, and two small remnants of the former island still resist its power. One of them, opposite to Patharghat, is supported by a rock of granite, which, when the river is low, rises a little above the surface. On the enlarged part of the Yamuniya the only place of trade is Bhagulpoor. On the south bank of the Ganges, in the whole of this extent, the only place of trade is Kahalgang; and on the northern bank the only place is Sahali, at the mouth of the branch of the river called Kalbaliya. A few miles below the mart called Sahali the Ganges sends, from its left side, a small channel, which after a course of eight or nine miles rejoins the great stream, just before that unites with the vast body of the Kosi. This channel is called Ganggaprasad, and has on its banks a small mart named Pangchgachhiya. It is only navigable in the rainy season.

From Patharghat downwards the Ganges, so far as concerned with this district, has been described in the account of Puraniya.* It only remains to give an account of some branches of the river that are included in this district, and of the places of trade on its banks. Between Patharghat and Paingti is an old channel of the river, in many places both wide and deep, but in the dry season quite stagnant, and in many places cultivated. It extends five or six miles in length, and is called merely Ganggacharan, or a branch of the river. A little below Paingti, where there is some trade, what has formerly been an island of considerable size, is now in a great measure united to the division of that name, the channel by which it was separated being now very narrow, and for the greater part of the year is quite dry.

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* See Vol. iii.

Between Teliyagarhi and Sakarigali are large islands in the river, but the principal channel goes by their northern side, and in spring the channel on their south contains little water. Below Sakarigali, where goods are exported and imported, are other more extensive islands, and the branches by which they are surrounded are navigable at all seasons. Above Masaha there is in the undoubted possession of this district an island, which is separated by a channel called Pangchgachhiya, that of late has been fast advancing to obliteration.

Since the time of Major Rennell the bend of the river between Masaha and Rajmahal has been entirely obliterated, the main channel of the river passing straight between the two places. The old course is now marked by a channel, in some places cultivated, and called the Baramasiya. On this part of the river Rajmahal is the only place of trade. Opposite to Udhawanala (Oudanulla R.) the river has made many changes since Major Rennell drew the plan of the lines erected there by Kasem ali.* It has at one time encroached, and carried away almost the whole fort; but it has since retired to a great distance, and left an extensive cultivated tract divided by two channels, one ofwhich separates into two arms. In the dry season these are not navigable; but in some parts they are wide, and contain large pools of stagnant water.

At Phutkipur the Ganges sends an inconsiderable branch called the Pagla to join the Gumanmardan; and some miles below it sends another, called the Khajuriyamohana. Neither is navigable in the rainy season. At Mohangunj the smaller Bhagirathi sends off another Pagla, encircling Mohangunj, and separating this district from a portion of Dinajpur. A little lower down the Bhagirathi sends towards the west a channel called the Kirtaniya, which afterwards bends south to Thanah Pratapgunj, where it communicates with a branch of the Gumanmardan. It afterwards turns east to rejoin the Bhagirathi, near Thanah Aurunggabad; but in this space it sends from its south side two branches, and receives on its north a channel, which separates from the Bhagirathi a little below the Kirtaniya, and, after running some way S. W. by the name of Uparjani, turns S. E., and is called Kalapani. The Kirtaniya in December is in many places dry; but the

* Now written frequently *Cossim Ali.*

Kalapani contains a great deal of stagnant water. Both the branches sent from the Kirtaniya go into the Virbhum district, and join a river called Baranadi, that will be afterwards mentioned. That towards the west is first named Boyaliya and then Kaksa. That towards the east is first named Madhojani, and then Chanduni. The Madhojani is a pretty large creek, but in December is stagnant.

In the account of Puraniya it is mentioned, that in the rainy season 1809, the lower channel of the Bhagirathi, leading to Calcutta, had been entirely shut; but in the following year it opened again, and was nearly of the same size with the upper channel; both however suffered a considerable diminution, owing probably to the new communication opened below the Jalanggi. On the upper channel, within this district, Mohangunj and Kaligunj are inconsiderable marts for exportation. Songti laid down by Major Rennell in this district, has been removed to the opposite side of the river, and placed in a corner of the district of Murshedabad.

Of the rivers on the north of the Ganges.—The first river, that occurs in proceeding down the left bank of the Ganges, is that which Major Rennell calls the Bogmutty *(Vagwati)*; but which now, at least, the natives call the Gandaki. The Vagwati derives its appellation from one of the names of the spouse of Vishnu, and in the valley of Nepal, where it has its source, is considered as holy; but, on reaching the plains of Hindustan, it looses its importance, and in the Tirahut district joins a small river, which passes Mozuffurpur its capital, and which is called the lesser Gandaki.* Although the Vagwati is by far the most considerable stream, yet as this Gandaki is probably an old channel of the great river of that name, the united stream is most commonly called Gandaki, and channels alone, that proceed from it in different parts are considered as the Vagwati. Numerous changes in the course of the Vagwati have given rise to violent disputes, that have greatly impeded the improvement of the country.

The Gogaree, in some parts called Ghagri, and in others Tilyuga, enters from Tirahut the division of Gogri, in an exceedingly neglected part of the country, as a very con-

* The Gandaki for nine or ten miles forms the boundary between Bhagulpoor and Tirahut or Tirhoot: its right branch is navigable at all seasons.—ED.

siderable stream, navigable at all seasons for small boats or canoes, and in the floods admitting large vessels.

The rivers south from the Ganges—have a very different aspect from those hitherto described, and more resemble the rivers of Mysore. Although the channels of some of them are of great width, none of them in this district is at any time navigable, except in the Eastern corner, where in the floods the water of the Ganges, filling the lower parts of their channels, renders them penetrable for small boats. Even the largest of them, having channels from 200 to 400 yards wide, are in general fordable throughout the rainy season, and foot passengers even seldom find them too deep or rapid for more than three or four days at a time, or oftener than three or four times a year; but several of them at that season assist in floating down bamboos and timber, although the natives do not avail themselves of this assistance so much as they might. The practice is indeed almost entirely confined to the rivers that fall into Virbhum.

In the dry season it is chiefly near their sources, that these rivers contain any visible stream, and then each of the numerous small branches appears to contain a greater quantity of water, than the vast channel worn by the united force of these torrents, when swollen by the periodical rains. The widest channels, indeed, appear in spring a perfect dry sand, but by digging a foot or two deep, good water may at all times be procured, and it is evident, that this subterraneous water has in some cases a current, as canals dug obliquely across the channel collect a small stream, which may be conveyed to some extent, and with great advantage for the purpose of irrigating the fields.

The Kiyul comes as a considerable channel from the country called Kharakdiha in the district of Ramgar, and leaving the old castle of Gidhaur at some distance from its western bank, receives, nearly opposite to that fortress, a river called Maura. The Maura rises by two sources from a chain of hills, which runs parallel to the frontier of the division of Mallepur, and at no great distance from it, in the district of Ramgar. The united streams of the Maura and Kiyul have formed a channel, not less than 400 yards broad; but in March, when I saw it there was no stream, and only a very little stagnant water in a few pools, at great distances from each other, and of inconsiderable size. Not only how-

ever its main channel, but several tributary streams afford a great supply of water for irrigation, and their banks are one of the finest parts of the district.

About two miles below the mouth of the Maura the Kiyul receives, from the East, a fine river named the Ulayi, little, if at all inferior to it in size. This also arises in the Ramgar district, where it is said to run through a narrow passage called Kewalghat, (Kewal R.) and then over a rock of white marble, immediately below which it enters this district in the division of Mallepoor. There I found it in a narrow passage called Ghoramara, (or the death of horses), a name not unapt to a passage very formidable to cavalry. In the parching heats of March, the Ulayi at this place contained a very fine stream, the largest I think, that I have seen among the hills of this district; but fordable by a child. About 10 or 12 miles below Ghoramara the Ulayi receives the Nagini, a torrent of short course, which contains a pretty stream, and comes from the hills towards the east.

Below this junction seven or eight miles the Kiyul receives the Angjana, the nymph of which, having being impregnated by Pavan, the god of storms *(Eolus,)* produced Hanuman *(Pan,)* the prince of monkies *(Satyri,)* and companion of Ram *(Bacchus.)* No part in fact, abounds more with the animals called Hanuman. The river has it source in hot springs, about 12 miles in a direct line south-west from Mallepoor, near which the Angjana joins the Kiyul. The Nakti is composed of two rivers, the Kathra and Mata.

In the Bengal atlas south and west from Mungger is placed a large lake, sending two small channels to the Ganges. The lake has totally disappeared, its situation in spring being covered with one continued sheet of wheat and barley; but the two channels remain. They are both of considerable size; but in the dry season contain only a few stagnant pools.

The Chandan, from the town of that name to Jamdaha, passes through a most beautiful country, the banks on both sides being cultivated and finely planted, while the supply of water which it affords, renders them highly productive. At Jamdaha it may be 150 yards wide, and at all seasons contains a stream.

From Jamdaha to Jathaurnath, where the Chandan entirely leaves the hilly country, the fertility of its banks is by no means diminished. At Thanah Bangka its channel is between

4 and 500 yards wide; but even in November its stream is small, and in spring its surface becomes entirely dry. A little below Bangka the Chandan admits on its left the Urani, a fine river, which supplies its banks with water, and they are most beautiful, and well occupied. It rises about 15 or 16 miles south-west from its mouth, and soon after receives an addition from Kasmau. A little below this, at Gangti (Guntee R.), I found it in March a fine sandy channel with a small clear stream. From Jathaurnath the Chandan passes south for about six miles, through a fine level country, and then separates into two branches; the most considerable of which is named Andhela.

The Dhobe is a more considerable river, and with its various branches waters the extensive division of Lakardewani; and, during the rainy season, is employed to float down timber and bamboos from the very centre of that territory. It rises near the northern boundary of that division, and for some miles runs west, parallel to the boundary of Bangka.

[Several of the smaller rivers and their branches are given at considerable length in the survey. On the N. of the Ganges—the Gangacharan is a channel between the Ganges and Gandaki; Kamaladahar and Kalyana small branches of the Gandaki. The *Mara* (dead) Gandaki is the left branch of the Gandaki, is nearly dry at some seasons. The Dakuynata a branch of the preceding. Chandaha flows into the Vagwati. The Katnai, Dayus and Loram into the Tilynga. On the S. of the Ganges the Nakti has its origin in two branches, the Keruya (W.) and Bhajaha (E.) The Sabaijor is the S., and the Dhobejor the N. branch of the Kathra. The Mata or N. branch of the Nakti has its origin in two sources called Malmana (S.) and the Bajan (N.); it receives the Jamkhar and Kasai. The Vaghdhar (or tiger-catcher) into the Kigul, as also the Manika and Morabe; and the Kasai and Had, or Bahuyara. The Amara and Mahelasariya form the channel of the Singgiya, or lake S. W. from Munggcr. The Garaiya and Bhela form the Mahelasariya. The Dakranata (proceeding from the same lake) called also Karelikol, where it changes its direction from E. and W., to N. and S. receives the Murghat. The Ghorghatnala falls into the Ganges near Thanah Kunurgunj. The Kodalkati which flows into the preceding receives the Ubhinala. The *Man* rises from Belan, receives a great accession from the warm springs of Mahadeva hill; then the cascade of Haha, the Pangchkumar, Patgha, Jalkunda, and then joins the Mohane. The Mohane receives the Khutiya, Auraha, (containing the Bamura, Gaighata, and Lubarni) and Sakriha. The Baruya arising in Gidhaur (Ramghar), receives the Budhiyajor, Mathsumbujor, Karing, Tabkuyanijor, Khatra, Mandaha, and Patun. Nine miles from Tarapur the name of Panis-alajhil, and then receives the Nesarachaongr, (called also the Tirakar, Baramasiya and Lohagar) which is augmented by the Amra, Gahera and Gangti. The Nesara subsequently becomes the Belat—then the Belasi, and next the Chandan, which also receives several small rivers, and is named in different places the Andhela, Kankayithi, Pangjarma, Gordhoyi or Bajani, Mahmudah and Guriyani. The Dakayi (rising in Virbhum) subsequently the Paraba, Deonar, Kanijuri, Dhobe and Baghora receives many small rivers. The Yamuni called also the Sahariya, and Bangiyhi receives the Khattik, Sundar and Bhayna. The Koya, Domjala, Oudanulla, Kodalkati, Gumanmardan, Morer, Katasi, Singgiha, Anupnagar, Malangcha, Patharghat, Bangsnai, Pagla, Brahmani, Duyarka, Bhimsar, Maruka Motihara, Maur, Singguru, &c. are among the numerous rivers, streams, torrents and marshes, which flow into the southern side of the Ganges in its course along the Bhagulpoor district.—[Ed.]

Lakes and Marshes.—In this district pieces of stagnant water, exclusive of pools in rivers, which in the dry season lose their current, are usually divided into two classes: *jhils* which contain water throughout the year, and *chaongr* which dry up in winter. Some of the jhils are evidently the old channels of large rivers, which at both ends have lost all communication with the stream; but are so filled with water during the periodical rains, that in spring they do not become dry. In this district, however, such are neither large nor numerous. The principal jhils here are a kind of lakes, that is low lands, which collect a great quantity of rain from floods and torrents, and that never become dry. The most conspicuous of these is Domjala south from Rajmahal, a noble piece of water, the banks of which were intended by Kasemali for the seat of a luxurious retirement. In the rainy season this lake is said to extend about seven miles from east to west, and from three to four miles from north to south. In the dry season it is about four miles long, and from one to one-and-a-half wide, nor does this diminution reduce the beauty of its banks, so much as might be expected; as it does not leave a fetid mud, or barren sand; but as the water retires, the banks are cultivated with spring rice.

Between Domjala and Rajmahal is another lake called Ananta Sarabar, which in the floods is of considerable size, but in the dry season is reduced to too small an extent, and is too dirty, and too much overwhelmed with weeds, to be an ornament to the vicinity; but it is not a nuisance, the land which it leaves being cultivated. The marsh into which Domjala empties itself, and which runs south from Udhawanala, is of very considerable length; but in general it is narrow, and in most places is so shallow, and so much choked with weeds, that it cannot be with propriety called a lake, except about its middle, where it swells out to a large size, and is called Chandsarjhil. In January this forms a pretty lake. There are many other jhils, particularly on the north side of the Ganges, but none of them of such a size as to deserve particular notice. The chaongrs, which in the floods are lakes, but soon after become dry, are of much greater extent, and seem to be on the increase.

One of the most considerable is situated south and west from Mungger, and in the time of Major Rennell would

appear to have been a lake. The Zemindars indeed allege, that it always was in its present state; but I think this is very doubtful; as they might be naturally afraid of acknowledging an acquisition of such a vast value; for it is said to contain 14000 bigahs customary measure, amounting to about 8700 acres, which every year yield, with scarcely any trouble, a crop of wheat, barley or pease. The change from a lake to a Chaongr is indeed very natural. The violent torrents of this country, and the turbid waters of the Ganges, poured in during floods, leave on stagnation so much sediment as to produce a great effect, and the enormous evaporation, soon dries up every thing that is not fed by a perennial stream.

A much more extensive Chaongr is situated south-east from Mungger, extending parallel to the Ganges, from near the rock Dholpahri for at least 12 miles to the east, and being from one to three miles wide. This land is almost totally neglected, and is considered as useless, although the greater part seems exactly similar to that now mentioned as so valuable. Part however is of a poor soil, and part dries up too late for sowing wheat, but would undoubtedly answer for some other crops.

South-east from Bhagulpoor are also two extensive Chaongrs, Elawa and Banggararajor, which are both considered as entirely useless, and left to produce the wild rose (*Koyakangta*), which they do in luxuriance, a sure proof of a rich soil. They are however late of becoming dry. On the north side of the Ganges the Chaongrs occupy a great extent of land, and are considered as totally useless. None of them that I saw are large, but they are very numerous, and scattered in all directions; and as they do not become dry until January, or even February, they render the country very difficult of access to the traveller. They are everywhere overgrown with the tree called Hijar, and the wild rose, and might, no doubt, produce spring crops of millet; but perhaps their greatest value will always be for pasture, the moisture, which they retain until spring, enabling them to push out a verdure, which at that season is totally unknown in the neighbouring plains.

METEOROLOGY.—South winds are very uncommon in this district, in the greater part of which the east and west winds prevail throughout the year; the former being about the

middle of June, and the latter about the middle of February, so that the east winds last double the time of those from the west; but they blow with less violence. When these winds change, and they are far from being regular, they seldom come from the north, and still more rarely from the south; but change to the opposite point from what usually prevails at the season. This year 1811, for instance, during the greater part of the season, in which the westerly winds should blow, those from the east have prevailed, and have been very strong. The most usual deviations from this rule are the storms from the N. W., which are very frequent from the middle of March until the middle of May; but in the eastern part of the district towards Moorshedabad there is a much greater deviation, the north wind usually blows from the middle of October to the middle of February; and from thence until the middle of June the regular winds, which are west, frequently change to south, and sometimes to north. These deviations seem to be owing to the influence of the Bhagirathi. The winds are not near so strong, and on the whole much more irregular than in the western parts of the district, where the influence of the Ganges is less disturbed. The rainy season usually lasts from the middle of June to the middle of October, but in favourable seasons during spring there are frequent showers, especially with the squalls from the N. W. These are often accompanied by hail, sometimes of a size that would not be safe to mention in Europe by any one who was afraid of being the scoff of the vulgar. All on the south side of the Ganges, if the seasons are favourable, there are between the middle of October and the middle of November one or two heavy falls of rain; but such rains often fail, and on the north side of the Ganges the farmers think them prejudicial. In December and January there is in some years, as this 1810-11, a good deal of rain, which is highly injurious to the crop of wheat, but improves that of barley.

In the morning there are usually fogs from the middle of December until the middle of February, but this year I did not observe them more than two or three times. Dews are pretty copious from the end of the rainy season until the middle of April, but gradually diminish as the season advances. The climate on the whole is much drier than that of Dinajpoor, and still more than that of Ronggopoor. It seems even considerably drier than Puraniya, and the hills

of Bhagulpoor seem rather to contribute to dryness by the reflection of the sun from the rocks. The winters I imagine are in general less cold than in Puraniya, this one, 1810-11, was very much so, and the natives thought it as severe as usual. They always however at this season sleep by a fire, and suffer much being very poorly clothed. They often talk of frost destroying the crops after strong westerly winds, and one such day was said to have happened this year. I was not up early enough to ascertain whether or not it actually froze, but a little after sun rise I saw no appearance of any such degree of cold. The climate, however, at least on the south side of the Ganges, is favourable for the artificial production of ice, and children from the middle of December to the middle of February frequently amuse themselves by the process. In the evening they boil some water, and expose it in shallow unglazed earthen pans to the wind. In the morning the pans are found covered with ice. A west wind is as necessary to the process as boiling, and operates by increasing the evaporation, as the west winds here are always uncommonly dry. I presume that the boiling operates in the same way, the sudden attraction of air by the boiled water contributing to that decomposition of its elements, in which the invisible evaporation of water in a great measure, I imagine, consists.

The heats of spring, when the wind is westerly, are very severe, these winds being hot and parchingly dry. In the eastern corner of the district the winds are only hot when they come from the south. In general the east wind is moist and temperate; but in May, 1811, the east winds, which at Mungger blew strong through almost the whole month, were often hot and parching. Towards the autumnal equinox the heat which is moderated by the periodical rains becomes very severe owing to the want of wind, but the nights become cool about the middle of October and continue so until August. The hills are no where of a height to reduce the temperature of the air in any considerable degree; and the reflection of the sun's rays from their rocks, and the shelter from winds that their forests afford, renders the parts among the hills hotter than the plains; so that the mountaineers when in the open country complain much of cold, and the sepoys of that tribe are uncommonly subject to rheumatism.

CHAPTER II.

HISTORY, TOPOGRAPHY AND ANTIQUITIES OF BHAGULPOOR, ETC. ETC.

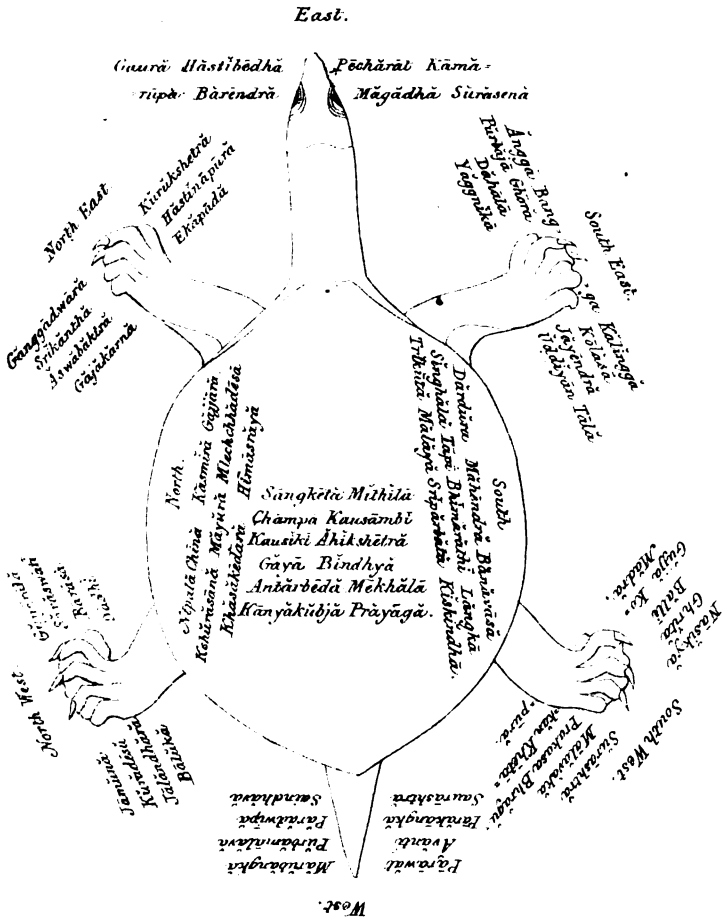
In no part have I found fewer, or more discordant traditions, concerning the history of the country; nor have I any where seen people so little interested about this important subject, a knowledge of which seems to be the most effectual of the means by which man is elevated above the brute, and by which his most dangerous prejudices and degrading propensities are most readily counteracted. It is commonly said, that in this district there are comprehended a part of four ancient countries distinguished in Hindu legend, Angga, Gaur, Mithila, and Magadha.

Angga, according to the most commonly received opinion, and according to the traditions of the inhabitants, is bounded on the east by Gaur, on the north extends to Baidyanath, and on the south to Bhuvaneswar, so that it comprehends the division of Lakardewani, and part of Kaliķapoor belonging to this district; but I shall not enter into any investigation of its history; as in visiting the small portion of its most remote and rude parts contained in this district I have procured scarcely any materials; and as at a future period I intend to examine a greater and more improved portion. *

In the account which I gave of Puraniya I have stated, that the whole of Gaur is contained in that district; but here I am informed that I was mistaken, and that the eastern parts of this district, as well as the whole banks of the Bhagirathi from Gaur city to the sea belong to that territory. I cannot take upon myself to decide whether the people of the Puraniya district, who considered the Ganges as the boundary, or those of this district who allege that they belong to Gaur, are most accurate; nor have I any thing new to offer concerning the history of the place. All the portion of this district that is situated beyond the Ganges belongs to the territory of Mithila, concerning which I can say nothing in addition to what has already been stated in my account of Puraniya,

* See Vol. iii.

only that this portion would appear to have been annexed to the Muhammedan kingdom of Bengal by Hoseyn Shah. This induces me to suspect that the Audisah, which in my account of Dinajpoor I stated to have been conquered by that prince, was not the province which we call Orixa, the Oriswa of the vulgar, but the Oriswa of the northern parts of Mithila, called Odyssa by D'Anville, as mentioned in the account of Puraniya.

There remains only to be mentioned the country called Magadha, a subject, so far as my opportunities of knowledge yet extend, that is involved in some difficulty. In a paper written by Dr. Leyden, that gentleman supposes, if I am correct in quoting from memory, that Magadha is the country of the people whom we call Muggs, a supposition in which I believe he is perfectly singular. The term Mugg, these people assured me, is never used, by either themselves or by the Hindus, except when speaking the jargon commonly called Hindustani by Europeans, and it is totally unknown to the people of Ava; but whether it is of Moslem, Portuguese, or English origin, I cannot take upon myself to say, many words among the natives being now in use as English, which it is impossible to trace in our, or indeed in any other language. The original country of the Muggs, which is the district of Chatigong, although the name has been extended also to Aracan (Rakhain) is by the Hindus called [blank in MS.] This opinion therefore occasions little or no difficulty; but it is not clear, in the opinion of some Pandits, whether any portion of this district belongs to Magadha, although in the part of it that is situated west from Teliyagarhi, the vulgar most usually consider themselves as occupying a portion of that territory. In the Saktisanggam Tantra, one of those revealed by the god Siva, but to whom I have not learned, is a chapter called Desmala, dividing Bharatkhanda or the country then known to the Hindus into 56 territories. A division into this number seems pretty universal among all the sects and nations of Hindus, and in my account of Mysore I have given a list of the division that is adopted by the Brahmans of the south; but in different parts the division seems to differ greatly, and that contained in the Saktisanggam Tantra, used in Behar, differs very essentially from that of the south, 23 of the divisions mentioned in each list being unnoticed in the other. In the Saktisanggam Tantra it is stated, that Ma-

Division of Bharatkhanda into 9 Kingdoms, according to the book called Swarodaya.

London 1838. W. H. Allen & Co. 7 Leadenhall St.

J. Netherclift Lithog:

gadha extends from the temple of Vyaseswar Siva on the Vindhyan mountains at the frontier of Gaur, to Vyaskunda, which is on the Karmanasa river. According to this authority the greater portion of this district is in Magadha, as indeed is usually allowed; but in the Vayupuran again, one of these attributed to Vyas, it is said, that Magadha extends from the Karmanasa (Caramnassa R) to the Kilbishi or Kiyul, and from the Gangga to the Vindhyan mountains, in which extent no part of this district, except a small part of Gidhaur, is included.

The oldest traditions current respecting the portion of this district, which is supposed to have been a part of Magadha, and which no doubt at one time belonged to the sovereigns of that country, are, that it was the scene of some of the actions of Ram or Bacchus; but the fables concerning this personage scarcely come within the scope of history, and what is related shall be mentioned in the account of the places of worship that are situated in the division of Mungger. The cosmographies of the Hindus it must be observed have undergone many changes. One which is called Swarodaya, and which is said to be more ancient than that detailed in the Pangchamaskandha of the Sribhagwat, now most commonly current among those who study the Purans, is said to have been originally composed by the god Siva, but was revealed to mankind by Narapati, a holy man, whom many Europeans may probably consider as the author; but even he is supposed to have preceded Vyas, the author of the Bhagwat. In this system of cosmography Bharatkhanda, or the country known to the Hindus, is represented as occupying the back and members of a tortoise, in place of occupying the southern corner of Jambudwip, the whole of which, according to the Bhagwat, occupies only the centre of the tortoise's back, the extension of knowledge in the time of Vyas having rendered the old doctrine totally untenable. In the older system a country called Madhyades, or the central territory, occupies the tortoise's back, and is surrounded by eight other divisions, which occupy the head, tail and limbs of the animal.* The northern parts of this district on both sides of the Ganges are generally said to belong to Madhyades, the name by which the people of Nepala now distinguish the Company's

* See Plate I, Bhagulpoor.

territory, in which indeed a great part of the ancient Madhyades is included, for in the Swarodaya the following provinces of the Madhyades are mentioned—Sangketa, Mithila, Champa (Champanagar near Bhagulpoor), Kausambi (towards Dilli), Kausiki, Ahikshetra, Gaya, Bindhya, Antarbeda, Mekhala, and Kanyakubja. It must be remarked, that in this list neither Magadha nor Kikat, said to be an older synonymous term, are used, although Gaya in the centre of Magadha is included. Madhyades was no doubt the country of the author of the Swarodaya, as being placed in his centre of the earth, and it then probably formed a powerful kingdom, or at least the author retained a knowledge of this having once been the case; but now all memory of such a circumstance is extinct among the people here, although it would appear probable that it may have been the kingdom of the Barhadrathas mentioned by Major Wilford in his curious paper on the kings of Magadha (Asiatic Researches, vol. 9), for Puru, the ancestor of that dynasty, is said by the learned Major to have obtained the central parts of India from his father Jajati; but concerning this dynasty, as usual in all investigations of Hindu antiquities, there arises a monstrous difficulty. The 14th in descent from Puru was Jarasandha, who was contemporary with Yudhishthir, and who was succeeded by 22 monarchs of this central and most powerful part of India; but according to the opinion commonly received among the Hindus, Yudhishthir and his descendants were sovereigns of India for many generations. In this district some remains are at present attributed to princes of both dynasties, and in order to reconcile the above mentioned difficulty I must return to the observation lately made, of the term Magadha not being mentioned in the provinces, which according to the Swarodaya composed Madhyades, although this no doubt included Gaya, that is situated in Magadha. I presume, on this account, that it was the ancestors of Jarasandha who were the sovereigns of India and of Madhyades, and that in this high station they were succeeded by the dynasty of Yudhishthir of Hastinapoor, who allowed the descendants of Jarasandha to retain as tributaries a part of their old territory, which then assumed the name of Magadha. Jarasandha, who seems undoubtedly to have been the sovereign of India immediately before Yudhishthir, is commonly indeed called the Raja of Magadha, and Major Wilford says, that

he it was who first gave the country that name, it having previously been called Kikat; but I think it not unlikely that the name Magadha was not known until the time of this prince's descendants, who, as I have said, were not probably sovereigns of India, but subordinate chiefs, for high sounding titles, that may occasionally be found connected with their memory, must in India be considered as of very little weight.

The remains supposed to be next in antiquity to those of the dynasties of Jarasandha and Yudhishthir are attributed to a Karna Raja of Magadha; but, as will appear from Major Wilford's account of the kings of Magadha (Asiatic Researches, vol. 9), the number of persons thus named is very considerable, and the eras in which they lived very different, from 13 or 14 centuries before our vulgar era, until four or five centuries after its commencement. To the above curious treatise I shall refer for more full information on the subject than I can undertake to give. I shall only venture to observe that the table of the kings of Magadha constructed by Major Wilford, although compiled with wonderful ingenuity from the discordant materials of the Purans, would seem to require much revision and abbreviation, as in order to protract the time the same personages seem to be very frequently repeated. It may be especially remarked, that Major Wilford in one part (A. R. vol. 9. page 105), following the confused nature of his materials, thought that he had identified the six Pala kings mentioned in the inscriptions published in the first volume of the Asiatic Researches, with the Andhra kings of the Hihaiaya tribe descended from Sri Karnadeva, who is placed in the third century of our era; yet these Pala kings he afterwards acknowledges (page 203) to have lived at the time of the Muhammedan invasion, and the first of them on good authority is allowed to have lived in the beginning of the 11th century of our era. According indeed to the interpretation of these inscriptions given by Mr. Wilkins and Sir William Jones, by which probably Major Wilford was at first guided, these princes governed about the commencement of our era; but Major Wilford on strong grounds since contends that the era Somvat, which is mentioned in the inscriptions, does not imply the era of Vikrama, as these gentlemen supposed, and an inscription (A. R. vol. 9. page 206) found at Benares ascertains that Sri Deva Pala, mentioned in the

other inscriptions, was alive in the year of Vikrama 1083, which according to different hypotheses may be either the year of our Lord 1027 or 1017. I shall therefore consider the eras of the antiquities which I have to describe, and belonging to these two dynasties, as tolerably ascertained. There can be little doubt, I think, that there were at least seven kings of the family of Karna, who were the most powerful Indian princes of their time, who began to reign at no long interval after the destruction of the dynasty of Chandragupta, and whom Major Wilford, by ingeniously tracing them in Chinese history, finds to have enjoyed a most extensive sovereignty until about the middle of the seventh century of the Christian era (A. R. vol. 9. page 112). This dynasty seems to have resided chiefly in this district, and to have rendered Magadha the most eminent province of India.

The family of the Palas also in its inscriptions claims universal dominion, and at the time of the first Muhammedan invasion seems to have possessed at least the greater part of the country watered by the Ganges. The princes of this family seem to have governed from the end of the 10th until the 12th century of the Christian era, when the Moslems seized on the western, and the Bengalese on the eastern parts of their dominions. It is unquestionable that the Pala Rajas were Buddhists, and I think it somewhat probable that the Karnas were of the sect of Jain, as Champanagar, evidently their chief place of residence, still contains traces of that worship, and as they do not appear to be favourites with the followers of the Purans (Asiatic Researches, vol. 9. page 113). In the south of India the Jain boast of having destroyed the Buddhists. Here a contrary course of events seems to have taken place, and Sakya, in the north at least, seems to have restored the doctrine of the Buddhists after its enemies had overwhelmed the followers of his predecessor Gautam.

Between the times of these two dynasties I have met with some traces by which I was a good deal surprised. The country we call Tanjore, south from Madras, in the Sangskrit is called Chola, and in my account of Mysore I have mentioned that the Chola Rajahs were powerful princes, and in the south are said to have erected many temples all over India. Several of these I have seen in Karnata, but they are in a

style much superior to some ruins, attributed to a Raja of Chola, which this district contains. This however may have been owing to the rudeness of the country which did not afford workmen. It is pretended at Baidyanath that Aditya Sen Raja of Chola, and sovereign of the whole country surrounded by the sea, built not only Baidyanath in Virbhum, but Mandir in this district, as well as other temples in adjacent territories. At Baidyanath it is supposed that this happened in the Satya yug; but, as I have said in my account of Mysore, the Chola Rajas governed from about the fifth to the seventh centuries of the Christian era. If the Chola Rajas of the south ever extended their dominions here, it must have been in a sudden invasion made by Aditya Sen, who with an army may have traversed India, compelling all the petty Rajas to pay him tribute; and he may have left behind him some officers who may have retained some part of the country as tributaries, and totally unconnected with their countrymen of the south. In this district the Cholas would now appear to be perfectly extinct. The Rajas of Chola were protectors of Sangkaracharya, and among the first who adopted the doctrines that are now considered as orthodox by the sect of Siva.

The last Hindu prince of consequence, of whom I find any traces, was a Raja Indradyumna, who has left considerable traces in the western parts of the district, and, it is said, in the adjacent parts of Behar, over both of which he is said to have been king, after the Muhammedans had obtained possession of Delhi. Finding himself unable to contend with these ferocious invaders, Indradyumna retired with his army and family to Jagannath. It is universally agreed that the temple there was founded by a prince of this name, but the Brahmans will not allow that a place so distinguished can be of so very modern a date: nor can I take upon myself to say that they are mistaken, but the subject seems to require farther investigation. Whether or not Indradyumna was a person of the family of the Pala Rajas, or a person who on their fall had seized on Magadha I cannot ascertain, but I think that the former is most probable. The Karna Rajas were undoubtedly Andhras, that is, belonged to the country near Hyderabad; and there is reason to think that the Pala Rajas, although not descended from the royal family were descended from

their servants, and were therefore probably of the same nation. On losing the Gangetic provinces a powerful dynasty still retained the original country of the Andhras, and the ancestors of Pritapa Rudra long governed at Warangol, as I have mentioned in my account of Mysore. I suspect that Indradyumna was the ancestor of Pritapa Rudra, who retired to the ancient dominions of Andhra, and having collected the powerful remnants of an overgrown empire, may have actually founded Jagannath, the vicinity of which no doubt belonged to the Warangol dynasty of Andhra princes. Major Wilford justly observes, that the Andhras were powerful in the time of Pliny, and they continued in possession of regal authority until the overthrow of Vijayanagar, in the 16th century of the Christian era, so that among the Bengalese, and even in the mountains of Nepal, Tailangga, one of the names of the Andhras has become the word in common use to signify a soldier. The tradition in this district is, that Indradyumna was a Bandawat Rajput. Some allege that the Bandawats are an impure tribe, some of whom still reside in the Ramgar district; while others maintain that the Bandawats are pure Rajputs.

From the time of Indradyumna until the English obtained the government of Magadha, the greater part of this district seems to have been in a constant state of anarchy. Some indeed of the original tribes seem never to have been reduced by the Hindu followers of the Brahmans, and many of them seem very lately to have put themselves under the guidance of the sacred order. These rude tribes seem to have always skulked in the hills and woods, rendering a very precarious and irregular obedience to the governors of the plains; while numerous adventurers from the west found a settlement among these rude people, and by superior treachery and ferocity brought them under obedience to themselves, without, in general, rendering the country more settled. Even during the government of Shuja Shah, when the Mogul government was in the highest vigour, and when this prince resided in the district, some part of the plains was subject to petty chiefs that despised his authority. The first considerable eruption from the west was of a tribe called Kshetauris, who subdued the Nat and Bhungiyas, and were succeeded by Rajputs. As several of these tribes remain in possession

of estates, I shall, in treating of the landholders, have occasion to give such relations, as I have heard, concerning the progress which these invaders made; and in treating of the different tribes and castes, I shall mention all that I know concerning the less remarkable chiefs who conducted the anarchy to which this wretched territory was so long a prey.

I find no traces of any part of Magadha having belonged to the Hindu kingdom of Bengal: but Hoseyn Shah annexed the whole of it that belongs to this district to the Muhammedan kingdom of Gaur, and secured the richer parts of it by strong fortresses, especially that of Mungger. From this power it would not appear to have been wrested until the reign of Akbur, from whose time, as I have said, the Moguls enjoyed a nominal authority over the whole, and possessed the banks of the Ganges; but their government seems to have been constantly disturbed by the invasions and refractory disposition of the chiefs residing in the wilder parts. Mogul officers of rank usually resided at Rajmahal, Bhagulpoor and Mungger; and the former seems to have been a favourite place with the Moslems of rank ever since Shuja Shah, the brother of Aurungzebe, made it the seat of the government of Bengal and Behar.

In Bhagulpoor I am told that there were the following Amels or governors, appointed by the Subahs of Bengal. In the reign of Muhammed Shah there were Delazag Khan, Reza Jammun Khan, Rahimdad Khan, Alikulibeg, Amiruddin Khan, Hendali Khan, and Alijawed Khan. In the reign of Ahamud Shah there were Alikuli Khan, Bahamun Khan, and Alikuli Khan. In the reign of Alumgir there were Subkhurali Khan, Jafurali Khan, Sayed Mukurem Khan, and Sheykh Fukhuruddin. In the reign of Shah Alum there were Mir Musoudali, Sultan Daud, Waresali Khan, Saduralhuk Khan, and Zaynulabdin Khan, who was succeeded by an English gentleman. These officers in general were of inferior rank to the governors of Puraniya, few of them having been honoured with the title of Nawab. Kasem Ali, on quarelling with the English, seems to have intended this district as his place of residence. He dwelt for some time at Mungger, was erecting a very great palace at Rajmahal, and intended to secure his independence by a line of fortifications erected at Udhawanala. The forcing this by Major Adams, in 1763,

put an end to these visions; but the turbulence of the chiefs of the interior increased with the utmost violence, and Captains Brooke and Browne were for several years employed in a miserable warfare with these tribes, in which they seldom seem to have been supported by Government, so as to be able to act with that vigour which the case required. Finally Captain Browne, by enormous concessions, induced the discontented to become quiet, and his concessions were confirmed by Mr. Cleveland, the civil officer, who succeeded him in authority over the wilder parts of the district.

KOTWALI OF BHAGULPOOR.—This small division includes the capital, Bhagulpoor. In the centre of the district, round the town, the land is high and swelling, and in a few places rises into little hills too steep for the plough; but in general it is excellently cultivated and finely planted. North from the town most of the country is liable to the inundations of the Ganges, but extremely fertile. It is however very bare, and does not look well, the villages being naked. South from the vicinity of the town also the country is very low, and in the rainy season almost impassable, but, except in occasional floods for two or three days at a time, it is not inundated. The soil in many parts is rather poor, but it is well cultivated, finely planted, and would be very beautiful were it not that the huts are wretched, and not concealed from view by fine plants, as is usually done in Bengal. In this division there are no woods, and the plantations consist chiefly of mangoes, with many Tal and Khajur palms, but scarcely any bamboos. The houses of the Europeans are more numerous than might be expected from the small society, several of them being unoccupied; and as some of them are large, and all scattered round the town in very fine and commanding situations, they add very much to the ornament of the vicinity. The natives have 150 houses of brick, all in a very bad style, and none of them respectable in size. There is a jail and hospital of brick, neither of which is any ornament to the place. There are many small mosques and other places dedicated to the religion of Muhammed, and built of brick. Although they are all small, and most of them are ruinous, they are in by far the best taste of any such as I have yet seen in the course

* The Kotwal is a native police officer, who has a town or district under his jurisdiction.—[ED.]

of this survey. In particular the monument of Ebrahim Hoseyn Khan, at Khunzurpoor in the east end of the town, and said to have been built about 150 years ago, is in an excellent taste. It is a square building, roofed by five neat domes, and is built in a style of plain neatness, so that the grace of its proportions is not as usual frittered away in an awkward search after ornament. The natives are not insensible to such merit, and fable that the Nawab, by whom it was built, cut off the hands of the architect, lest he should ever design a rival to this favourite work.

The Zemindars of the district erected to the memory of Mr. Cleveland a monument of brick, which is a lofty building, placed in a very conspicuous situation, and at a distance makes a good show. It consists of a Hindu pyramid, of the most cumbrous rudeness, surrounded by an ill designed Grecian gallery. A monument of stone, with an inscription highly approving of his conduct, was sent by the Court of Directors from England, and placed in front of the house which the same gentleman had occupied when alive. No pains have been taken to preserve this handsome work, and wild fig-trees have already fixed their roots in the crevices, and in a few years will demolish the whole. The town of Bhagulpoor, (or the abode of refugees,) although reckoned to extend two miles in length, and from one mile to half a mile in width, except that it is in a beautiful situation, is a very poor place. The houses of the Europeans and the Moslem places of worship are great ornaments; but the town consists of scattered market places, meanly built, and owing to the declivities of the ground, very inconveniently situated. Through and round it however there are tolerable roads, and a few trifling bridges. The most compact part is the market place called Shujagunj, in which there are three or four streets closely built. The other market places are Saray, which has also some compact buildings, Yogeswar, Munshurgunj, and Khunzurpoor, in which last the courts of law are held and the office of the collector is situated. No estimate could be procured from the native officers of police concerning the number of houses contained in the town. My people, after examining the whole, think that they may amount to about 5000, but rather more than less, and the alleged importation of commodities from all the vicinity would imply a

very considerable population, at least to the rate of six persons for each house. The markets are very badly supplied, and the price of almost every thing is enormously high when compared with that demanded in other parts of the country. Lakshmigunj and Champanagar may be considered as one town; they are very populous, and tolerably compact. They may contain about 1500 houses, mostly occupied by weavers, who have some religious buildings of brick. Nathnagar, a little south from Champanagar, is also for this country a good town, containing perhaps 900 houses, and is the residence of traders.

The Roman Catholics have at Bhagalpoor a small church. The place of worship that in general is considered as most holy by the Moslems is the brick monument (Durgah) of Mogulana Shahbaz, close by the Thanah. It is by no means remarkable either for size or elegance, but daily offerings are made by the people of the vicinity, and many strangers frequent it in the month Aswin (from September to October.) A Fakir has the charge and emoluments, and is called Mozouwor. The monument (Durgah) of Pir Shah junggi Shahbaz is larger than the last mentioned place of worship, and enjoys a remarkably fine situation on the top of a small hill about a mile from the office of police; but the buildings are very rude. About 1000 people from the vicinity assemble on the day of the saint, and no less than 20,000 on the day Kurbula, when all the gaudy pageantry, used in celebrating the memory of the grandsons of the prophet, are thrown into a large pond at the bottom of the hill. On both occasions the keeper (mozouwor) has some profit.

Among the Hindus the chief place of worship is the Ganges. On the full moon in the month Magh, about 25,000 people, of whom 20,000 are strangers, assemble on the banks near Barari, and bathe at what is called Dira-ghat. Formerly they bathed at Shukkurpoor on a Dira, or island in the Ganges; but, this having been carried away, they have retired to the high shores near Barari.

The old heretical sect of the Osawals have in this division two remarkable places of worship, remnants, if I am not mistaken, of the religion which prevailed during the government of the Karna Rajas. As the sect is here completely extinct, farther than that one or two attendants on these temples still reside, I shall now state all that I have to say on the subject.

At Bhagulpoor I was informed, that at Champanagar there was a temple, where the Osawals worshipped Parasnath under the form of the Phallus *(Lingga)*; but on going to the place I found, that this was a mistake, owing probably to the ordinary and natural inclination of my informants to twist every thing to their own doctrine. There are two temples of considerable size, built of brick, and covered with plaster, the ornaments on which are very rude. The one has been lately rebuilt, and the other is not yet quite finished, both entirely at the expense of such of the family of Jagat Seth, the banker, as still adhere to the worship of their fathers, although the chief has adopted that of Vishnu. The two buildings are nearly in the same style; they are square, and consist of two stories. In the centre of each story is an apartment, which is surrounded by a narrow open gallery. The upper apartment is covered by a dome. The stairs, which are in the thickness of the wall, are, as usual in native buildings, to the last degree miserable; but the view from the roof is admirable. In the lower apartment of the temple, that has been finished, are small images of white marble representing the 24 deities of the Jain religion, sitting cross-legged, and exactly resembling the images worshipped by the Buddhists. The images worshipped are not only totally unlike the Lingga; but the temples are not dedicated to Parasnath, as was pretended, but to Vasupujya. The Pujaris are the only people of the sect who reside at Champanagar, and were fat men, totally illiterate; nor could they give me the least account of the history of the place, nor of the sect. Many pilgrims, especially from Marwar in the west of India, are said to frequent these temples.

The other place of worship belonging to the Jain is at Kabirpoor, at no great distance from Champanagar. In the neighbourhood it is usually called Vishnu Paduka, or the feet of Vishnu, which the hasty ill informed people, who make the Jain and Buddhists branches of the followers of Vishnu, would no doubt consider as proving their theory; but this is a name given only by the vulgar, and both Brahmans and Jain agree, that the object of worship here represents the feet of the 24 deities of the Jain, which the inscription states to be those of Vasupujya, who was born at Champanagar or Champapuri. This emblem of the deity is very rudely carved,

and represents the human feet. The inscription* between the feet mentions the name of the god. That before the toes implies, that it was made by Singheswar Stati, Kundakundacharya Bhattaraka, Kumudachandra Stati, and Dharmachandra Upadesya of the fortunate place Tajapattar, and of the tribe (Jatau) Bagherwal. The date, according to the reading of the Pujari, is in the year of Sambat 694, and of Sak 559; but before each is a mark (q) resembling the Hindu cypher that represents one, which would make the date 1694 of Sambat, and 1559 of Sak, or A. D. 1637. The Pujari asserts, that in Jain inscriptions this mark is prefixed to all numbers, and has no value. The inscription on the front of the stone is an exhortation to the believers in the Jains to worship the feet of Vasupujya; but some parts of this inscription, although fairly written, are not understood by the Pandit of the survey, who says, that it contains words, which seem peculiar to the sect. The stone formerly was in a small temple; but, when I visited the place, in order to have the building repaired, had been moved to the house of the Pujari. In front of the temple are two hollow columns of brick, with a spiral stair in the centre of each. These are called Manikasthamba, or in the vulgar dialect Manikthanı, which may perhaps throw some light on the history of the pillar, so named, near Dhamdaha in Puraniya. One of these columns has apparently inclined from the perpendicular, but both are in good condition. The Pujari says, that his father was a Maithila Brahman, and a follower of Vyas, to whose doctrine he also adheres; but a woman of great riches, named Yamuna Bai, and descended from the original founders, having some years ago come from Karinja in the south, near the sea, settled an endowment on his father to induce him and his descendants to act as Pujaris. On this account they have received instruction from the Jain sufficient to enable them to perform worship, and to satisfy the curiosity of pilgrims. I suspect, however, that they are heretics, who, feeling this title disagreeable, pretend to be followers of Vyas. I met with no one, who could tell any ancient denomination for the country. Bhagulpoor seems to be a name of no considerable antiquity, and is said to have been given by the Mogul officers, who collected a number of fugitives, and defended

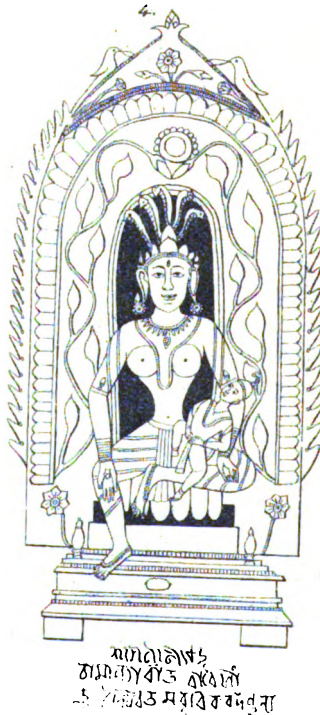
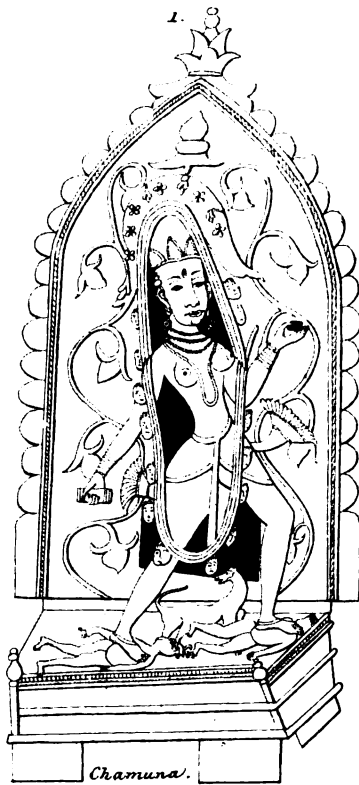
* See Plate IV.—Bhagulpoor.

them in the plains from the violence and depredations of the disorderly chiefs of the interior. It formed a part of Serkar Mungger.

The place of most remarkable antiquity according to the Pandit of the mission, is a cave and subterraneous gallery overhanging the Ganges at Mayagunj, a little east from the town. He alleges that this was the abode of Kasyap Muni, the son Kasyap, who was made by Brahma at the creation of man. Kasyap by various wives was father of many of the petty gods (*Devatas*), besides infidels (*Daityas* and *Asurs*), devils (*Rakshas*), warriors (*Danab*), monsters (*Rahu* and *Ketu*), birds, serpents, &c. Besides this multifarious offspring many Brahmans, in no manner different from ordinary men, claim a descent from Kasyap, who is also claimed by the Buddhists as one of the lawgivers of their sect, who preceded Gautam. Without attempting to explain such difficult matters I must observe, that the peasants in the vicinity of the cave give an account more suited to my capacity. They say, that it was the residence of a hermit, who lived about 150 or 200 years ago, that is some time before they remember: but that, until the English government, the small hills around were covered with thickets, among which no one ventured, as they sheltered thieves and wild beasts. The cave in fact, is very small, and unfit for the father of such a progeny at Kasyap possessed. It has been dug in a dry hard clay containing calcareous concretions. The roof is low, for the pillar, by which it is supported, is not six feet high. Two narrow subterraneous galleries lead from this cave, and are said to terminate, in small chambers, at a considerable distance. About 15 years ago one of these was opened, and in it was found the skeleton of a man, who from the position of the bones, Mr. Glas the surgeon of the station, then present, supposed to have died in the spot. These circumstances would rather seem to point out the cave as the retreat of a robber than as that of an hermit; although it is not unlikely, but that the same person may have united both professions.

Between Champanagar and Bhagulpoor is situated Karnagar the chief residence of Karna Raja. The ruin is exactly in the same style with that in Puraniya, which is said to have been the house of Kichak, contemporary with the Karna to

whom this work is attributed, that is it consists of a square rampart, without works, but surrounded by a ditch. There is no cavity within the rampart, the ruins having been sufficient to fill up the whole space, which is still very high. The hill-rangers are now cantoned on the ruins, which are finely adapted for the purpose, as they are dry, level, and of abundant extent both for quarters and for a parade. The people in the vicinity pretended to me, that this Karna was the half-brother of Yudhishthir by the mother's side, and the style of the ruin is rather favourable to their opinion.

This opinion is also adopted by Major Wilford in his account of the kings of Magadha, (Asiatick Researches, vol. 9, p. 104), and he mentions, that this person taking part with Jarasandha, the opponent of his brother, was rewarded with a small kingdom, called after his own name Karnades, which long continued to be enjoyed by his descendants; and in one place Major Wilford mentions this as being the Bhagulpoor district; but in others (probably following the discordant tradition of the Hindus) this kingdom of Karna is considered as the same with the Angga or the western parts of Virbhum: perhaps the kingdom of Karna may have included both territories. All the Brahmans of this district however, that I have consulted concerning this Karna Raja disallow the idea of his being the contemporary of Yudhishthir, and consider him as a prince, who attempted to seize on the throne of Vikrama. As, however, there have been many Vikramas and many Karnas, all usually confounded together by the Brahmans, I shall not pretend to determine the discordant opinions; I shall only remark, that the princes of Champa named Karna where in all probability of the Jain religion, as Vasupujya the 12th great teacher of that school was born at their capital, and as the monuments of that religion are the only ones of note in that vicinity. It must however be allowed, that on the ruin at Karnagar there are two small temples, one of Siva and one of the Parwati, two gods of the Brahmans, and each is provided with a Pujari of the sacred tribe. These in the vicinity, although still tolerably entire, are attributed to Karna. Even allowing to this all due weight, the opinion of the hetorodoxy of Karna, which I have mentioned, need not be relinquished, as the Jain admit not only of the existence, but of the worship of all the Devatas of the other Hindus.

Four small Brass Images found in a Tank near Karnagar.

London. 1838. W. H. Allen & Co. 7 Leadenhall St.
J. Netherclift Lithog.

In the ruin is also said to have been a Yogikunda, where the Raja is said to have kindled a fire when he prayed.*

I must also remark, that in digging a tank in the immediate vicinity, the people of Mr. Glas, surgeon to the station, found four small images of brass, of which he allowed me to take drawings, (see plate 2.) No. 1 represents Chamunda, and No. 2 Mahishmardini, two destructive spirits worshipped by the Brahmans of the north; but No. 3 and 4 are considered by the Brahmans, whom I have consulted, as strange gods. On No. 4 is an inscription, which my people have some difficulty in explaining. It is dated after Parsa 925, I presume years after the era of Parsa, probably meaning Parasnath the 23rd teacher of the Jain. It is also dated at Champanagar; but the rest of the inscription, probably in the old Magadha or Pali language, cannot be explained. For the protection of the vicinity the Moguls had erected two petty forts. One in the town is completely obliterated, and of the other very few traces remain.

Ratnangunj.—This is a fully occupied and very beautiful country, especially towards the north-west, where there are some rocky hills finely wooded, while the adjacent country is thoroughly cleared, and adorned with numerous plantations, consisting almost entirely of mangoes, intermixed with palms. The villages however are poor, and the wretchedness of the huts is concealed by fences and bushes. There is no lake nor marsh of the least note. Two of the Zemindars have small houses of brick, but there are no buildings that can at all be considered as an ornament to the country. Amarpoor, containing about 200 houses, is the only place in the division that can be called a town.

There are no remains of remote antiquity. Between Ratnangunj and Amarpoor are the traces of a fort of considerable size, being above a mile wide, in the direction that I crossed; but it contains no traces of splendour, nor of any considerable strength. It is called Dumariya, and is said to have been in the possession of a chief of the Kshetauri tribe, who refused to submit to Sultan Shuja, and was destroyed by that prince, who afterwards erected near it two buildings, to which he occasionally repaired to hunt. I visited one of these

* See p. 39.

situated at a village called Banhara. It possesses neither great size nor elegance, and consists of a small tank surrounded, without the mound thrown out from the cavity, by a rampart of earth and ditch, so that even near his capital in the very strength of the Mogul government, the king's son was not safe in a hunting party, without a fortification to secure the place of his night's repose. In the day he of course hunted with an army.

Kodwar consists of three parts: the first low land surrounded by the Ganges, or near its bank, tolerably well cultivated, but very bare; this occupies the northern parts. Secondly, the central parts which are fine high swelling land, remarkably well occupied, and finely planted with mangoes, but few palms or bamboos, yet still very beautiful. Thirdly, the southern parts naked plains, in some places low and flooded during the rains; much neglected and very dismal, much of them being overgrown with stunted trees and thickets of prickly bushes, but abounding in game, and very favourable for the chase. Near the thanah are two small *jhils* or lakes, that contain water throughout the whole year. In this division there is no brick house nor temple.

Kodwar, although a small town containing about 200 houses, has neither shop nor market. The only other place in the division that can be called a town is Soulutgunj, a little east from the thanah. It is about the same size with Kodwar.

Lokmanpoor is a large and tolerably populous division, of a very irregular inconvenient shape. Parts of Kotwali and Fayezullahgunj are either entirely surrounded by this division, or are hemmed in between it and the great Ganges; and its boundary with Kumurgunj is ill defined and keenly disputed. Although there is a good deal of marshy land, there is no one marsh of any considerable size. The country may be divided into four parts: First,—a narrow space near the banks of the Ganges, bare, but tolerably occupied. Secondly,—a very fine populous well occupied tract, beautifully planted with mangoes intermixed with some bamboos and a few palms, and extending from the above to the Tilyuga. Thirdly,—a very low neglected country, on both sides of the Ghagri, some of it overgrown with thickets of stunted trees and bushes, or with reeds and coarse grass; and fourthly,—a higher and better cultivated tract towards the north, of rather

a poor soil, but well planted, mostly however with mangoes alone, and productive chiefly of rice. The chief Zemindar has in his premises a ruinous brick house, very unsuitable to the extent and value of his estate.

Bihipoor, the residenee of the Darogah commissioner and Kazi, is a large scattered place, containing about 300 houses, four of them brick, and carries on some trade. Besides there are the following small towns: Madhurapoor contains about 400 houses, Krishnagunj 150 houses, Chorhanda 100 houses, Bhawanipoor 150 houses, Pangchgachhiya 100 houses, Sibgunj 250 houses, and a subordinate factory belonging to the agent for supplying salt petre. The above places have weekly markets. Alumnagar has no market, but contains above 200 houses.

Pergunah Chhai, which constitutes almost the whole of this division, is called the country (*Velayet*) of a certain Muhammedan saint named Shah Mangun Auliya, who has an endowment in land, and receives annually one rupee, and one *man* of grain from each village in his territory, and 15 anas a month from government. The chief place of Hindu worship is Sibgunj-ghat, on the Ganges, where from 25 to 30,000 people assemble annually, on the full moon of Magh, to bathe. At the full moons of Vaisakh and Kartik 5 or 6,000 assemble at the same place.

Gogri—like the last division, this consists of four parts; a narrow tract near the Ganges bare, but tolerably cultivated, except where the squabbles of contending landlords have prevented the granting of leases; a rich finely planted part bounding the former on the north, but less ornamented with bamboos than the similar portion of Lokmanpoor; a low neglected dismal portion on the banks of the Ghagri here very extensive, and more overrun with stunted woods and thickets; and finally high rice grounds, towards the north, rather poor, but well planted, almost entirely with mangoes. In this vast extent are only two wretched houses of brick, one of them ruinous. There is one neat but small mosque belonging to the Kazi. Gogri the capital, has much the resemblance of a Bengal village, being buried in fine groves of trees, and the houses being concealed by hedges; but it scarcely contains 100 houses, Rasulpoor, Raghunathgunj, and Setonabad are about the same size.

This country seems always to have been in a very rude

state, and the only remains of antiquity, except the mosques, are a few petty fortresses, probably of a more recent date. Chandalgar was the residence of a Raja of that low tribe, to whom part of Pharkiya belonged. Bhawardihi is another fortress that was the abode of a chief of the low tribe Bhawur, to whom Bahorsaha belonged. Mahadipoor, another petty fort belonged to a Goyala, the former owner of Sehazari. These low chiefs were destroyed by a colony of Rajputs, who still hold much of the country. They built several petty forts to protect themselves from each other, from the Chakoyars, a tribe of predatory Brahmans in Tirahut, and from the authority of the Moguls, for the country continued in a complete state of anarchy, until some time after the commencement of the government of Mr. Hastings. The Mogul officers also erected some forts; but the whole are trifling, and unworthy of particular description. During these disturbances, besides petty cuttings of throats innumerable, 10 or 12 battles of some note took place; and at each a Durgah, dedicated to some Moslem saint, was erected over the slain of both parties, whether Moslems or Pagans. These monuments are called Gung-sahid, and have trifling endowments.

KUMURGUNJ.—Some part of the division east-end, consists of low lands surrounded by the Ganges. At the west end are some hills and rocks finely wooded, and at their bottom some high rice land; but the great part of the jurisdiction consists of two long narrow lands running parallel to the Ganges, and of very different descriptions. That next the river is high, and consists of a strong red clay, containing in some places calcareous concretions. This is very fully occupied, and most beautifully planted with mangoe trees intermixed with a great many Fal and Khajur palms; but this is very narrow. The interior is very low, overwhelmed in the rainy season by water, and in the dry it becomes bare and dismal, and is almost totally neglected. Two brick houses belong to natives, and there are two religious buildings, that are some ornament to the country; more however from the fineness of their situation, than from any elegance or grandeur that they possess. The villages are not concealed by plantations, so that the wretchedness of the huts is fully displayed.

The largest place is Sultangunj, where there are about 250 houses, and a good deal of trade. Two of the houses are built of brick, and three are tiled. Next to Sultangunj in

size is Chichraun, a town of invalids, containing about 220 houses. The only other place that can be called a town is Kumurgunj, which may contain 100 houses.

The place of worship by far most frequented by the Hindus is the bank of the Ganges, immediately above the hill occupied by the mosque of Baiskaran, and opposite to a rock in the middle of the river occupied by a temple of the Gaibinath Priapus. Such places where the sacred river washes the rock are called Sila sanggam, or the union with stone, but that is not assigned as the reason for the peculiar holiness of the place. This is owing to the river in this part running from the south towards the north. Wherever this happens the river is no doubt reckoned peculiarly holy, and is called Uttarbahini. The actual reason of the preference given to such parts of the sacred river is, perhaps, that they are not common, as the general course of the river is towards the south, but in this district I usually find it attributed to a very different reason. It is commonly said, that at these places the god Siva took such liberties with the frail nymph of the river as might be expected from his indecent form. Of the three holy places called Uttarbahini in this district, this is by far the most frequented, and yet the circumstance of the river running towards the north is by no means well defined, while at the other two it is very remarkable. Farther it must be observed, that the Hindus have no native appellation for the place, but universally call it Sultangunj, a Persian, or rather an Arabic word. These circumstances induce me to suppose that the celebrity of the place has arisen from some old religion that has now become heretical, and which has been celebrated on the two adjacent rocks that are covered with figures in bas-relievo, totally unconnected with the religious places that are now in possession, one being sacred to Siva and the other to Muhammed. It is indeed said that Jahnu Muni of Gaur, who one day swallowed the Ganges, as I have mentioned in my account of Puraniya, had here a house (Asram); but this is a story rather apocryphal, and seems rather to relate to the personification of a natural change in the course of the river, than to any event in the course of human affairs. Whatever may be the cause, 18 families of Brahmans, containing perhaps 50 adult males, live by officiating as the priests (Pandas), who perform the ceremonies practised by

those that bathe. At the three usual full moons, from twenty to thirty thousand persons may in all attend to bathe, but the great emolument of the priests arises from about 50,000 pilgrims who at various times come to carry away a load of water which they intend to pour on the head of various celebrated images in distant parts. In the south of India I have met pilgrims carrying their load from this place, but by far the greater part goes to Devghar in Virbhum, where it is poured on the Priapus or Lingga called Baidyanath, to whom this water, taken from a scene of former pleasure, is considered as peculiarly acceptable.

West from the thanah about four miles, at a place called Kumarpoor, is a Lingga called Siddhanath, which was endowed by a Kshetauri chief, whose name has fallen into oblivion. The land is enjoyed by a Dasnami Sannyasi, but the building is trifling, and the image attracts little notice, although a few assemble at the festival of the god. The only temple now of any note is that on the rock which is surrounded by the Ganges and is placed opposite to Sultangunj. This rock seeming to me connected with the principal antiquities of the place, I shall proceed to treat of them in common. A little west from Sultangunj is a square elevation called Karnagar, which exactly resembles that at Champanagar called by the same name, but is not so large. Some traces of the brick wall by which the outer side was faced are still observable, and it is said that a good deal remained pretty entire until it was pulled down by Colonel Hutchinson to erect a set of indigo works. There is no cavity within, the whole being filled with rubbish and bricks, and the dwelling house belonging to the indigo works is placed on a very fine situation in the centre. It is said in the vicinity that the monument of a Muhammedan saint was destroyed to make room for this house, but I look upon this as one of the pieces of scandal so commonly propagated by the people of this district to vilify the English character, as I have in general heard the natives speak of the gentleman in question with great respect. The size of Karnagar is not considerable. It appeared to me in riding over it to contain five or six acres, but the natives say that it contains about 25 bigahs, which is between 12 and 13 acres, and this may very likely be more accurate than my conjecture. The people whom I consulted considered the

Karna Raja, to whom this palace belonged, as the same with the Karna Raja who dwelt at Champanagar near Bhagulpoor, and the style of both the ruins is exactly the same. Major Wilford, however, considers these Karnas as perfectly different (Asiatic Researches, vol. 9, page 108), and in the table of the kings of Magadha, he makes the owner of the palace near Sultangunj or Sri Karnadeva to have reigned in the 3rd century of the Christian era, while he makes the Karna of Champanagar to have been contemporary with Jarasandha, first king of Magadha, in the 14th century before the birth of our Saviour. The former Karna he considers as king of all India, the latter as a petty chief of Bhagulpoor: yet, as I have said, the ruins attributed to the chief are much more extensive than these attributed to the monarch of India.

This Karna, the great king, according to Major Wilford, was an usurper, and confined his predecessor on the rock near his palace, that is surrounded by the Ganges, which I shall now proceed to describe. It is a very rugged mass of granite, separated from another hill of the same materials, now belonging to the Muhammedan saint by a branch of the Ganges, perhaps 400 yards wide. The summit is occupied by the temple of Siva called Gaibinath, surrounded by the buildings of a convent of Dasnami Sannyasis. These buildings are in good repair, and from their noble situation look well from a distance; but on a near approach I found them the most misshapen and rude mass that I have ever beheld. According to tradition Harinath, a very holy person, who had forsaken the pleasures of the world (Sannyasi), took up his abode on the rock. This person was at vast trouble in making pilgrimages to Baidyanath, until at length the God informed him in a dream that he would have no farther occasion to come so far, as on his return to the island he would find an image, to which he might address his prayers. This accordingly happened, and Harinath became the Mahanta, or head of a convent of Sannyasis, who took up their abode at the temple of the image, a Priapus called Gaibinath. This could not have been in a remote period, as Digambar the present Mahanta says that he is the thirteenth person who has enjoyed the dignity, to which no young man can hope to aspire. The place does not seem to have risen into great reputation until lately, as Ananta the last Mahanta is said to

have erected most of the buildings that now stand. Almost every person that comes to bathe at Sultangunj, on the three full moons, visits the temple of Gaibinath, carries up a pot of water, and pours it over the image. At the festival of the God a good many perform this ceremony, but in order to render it more efficacious, such as have strength of head and limbs, carry the water to the summit of the spire, and dash it from thence on the image. This however is a work to which many cannot pretend, as the spire is lofty, and the ascent to it is by ladders of a very tremendous appearance. The Mahanta acknowledges no Guru nor superior, and was born in the family of a Brahman of Kharakpoor; but he has given up all the insignia of the sacred order. He has about twenty disciples, and the community has five or six servants. In the rainy season they have little or no communication with the continent, the stream then rushing past with a violence that renders the approach dangerous; but a large proportion of the neighbouring Hindus in the fair weather receive instruction from the convent; while most of those who frequent Sultangunj to bathe at the three regular full moons, all in the fair season, all those who visit the temple at the festival of the God, and almost every Hindu of note who passes up or down the river in fair weather make offerings, which enable the Mahanta to lay up stores amply sufficient to supply the few wants of his disciples, who appear to be very poor creatures living in a state of listless mortification. The Mahanta fairly said, that the community was possessed of no knowledge but the art of begging, and that the utmost stretch of its science is to be able to read some forms of prayer which no one of them understands. They deny all knowledge of the state of their island previous to the arrival of their first Mahanta; yet it is evident that the place had previously been dedicated to religion. Below the buildings of the Sannyasis is a small temple dedicated to Parasnath, the 23rd teacher of the sect of the Jains. The Sannyasis say, that Baidyanath has given orders that the Jain should no longer worship on his sacred rock, which is as much as to say that they, as his servants, have put a stop to this heretical practice. Some Jains however, I am told, still come privately to the place. The temple of this sect, now standing, seems evidently to be a very modern work, the authority of the Sannyasis having

probably been unable until lately to expel the heretics. There are however on the rocks a great many figures in bas relievo, and some of them seem to be of very great antiquity, as being much worn, although carved on such durable materials. These carvings represent various personages received by all sects of Hindus as distinguished beings, among which I observed Parasuram, Narayan and Lakshmi, Ananta sleeping on a snake, with the goose of Brahma flying over him, Krishna and Radha, Narasingha, Ganes, Hanuman, and Siva; but I observed also a Jineswar, which I believe is never to be found in any place dedicated to the worship of the Hindus now reckoned orthodox.

BATEMANGUNJ or HAVELI MUNGGER.—This is a very small division, but remarkably well occupied, and containing a pretty large town. A little west from Sitakunda is a lake, which at all times retains a little water; but in the dry season does not look well, as its banks are dirty. In the rainy season it is a very fine object, as it is surrounded by hills, woods and rocks. The fort of Mungger itself is situated on a rocky eminence, and all towards the east and south the district, although finely cultivated, contains many rocks, in some parts rising into little hills, and, being finely planted, is perhaps one of the most beautiful parts in India. On the most considerable of the hills, in a grove, is the monument of a Muhammedan saint, and near it is the house of an European, that are great ornaments to the country, as is also the house of the commandant of the garrison, which is by far the handsomest building that I have seen in the course of my survey. The western part of the division is level, and rather too low to be well planted; but in spring it looks very rich, being then covered with one uninterrupted sheet of wheat and barley. The parts surrounded by the Ganges, and beyond it, are very low and bare, and in some places rather dismal, owing to disputes between the proprietors, which have prevented cultivation. Besides the houses of Europeans the natives have 210 dwellings of brick, which together with several ruins and the fort, add much to the ornament of the country. There are in the vicinity of the fort a good many small bridges of brick, made I believe by Europeans, and in good repair, and these, exclusive of the necessary storehouses

in the fort, some of which are good and very neat, are the only public buildings worth notice.

Mungger is a town of some note and great size, but as usual by no means populous in proportion to its dimensions. It consists of sixteen different markets scattered over a space about 1½ mile long from N. to S. and 1 mile wide. The only two parts in this extent that are close built, or resemble a town, are without the eastern and southern gates of the fort: at each is a street so wide as to admit carriages to pass, and closely built with a good many brick houses. Besides these market places, between the river and the northern gate of the fort is a suburb, which may be considered as the port, but it is chiefly built on the sands of the Ganges, and every year during the floods many of the houses must be removed. No enumeration of the inhabitants has been taken. The native officer of police thinks that in the whole there may be 7000 houses, but my native assistants are not willing to allow much more than a half of that number, or 3600 houses. Their opinion is founded on a careful inquiry from the people of each market; and although it is probable that the numbers may have designedly been underrated, yet they are, perhaps, nearer the truth than the native officer of police, who speaks merely by a random estimation. I do not think that by any means the population can be extended beyond 5000 houses. These, though very small when compared with the houses in European cities, are full of inhabitants; for six persons, I am told, may on an average be allowed for each. This would give a population of 30,000 persons, the whole charge of whose conduct, with that of a populous district, is entrusted to one man, who is allowed 25 rupees a month, and who, in his manners and education, is scarcely fit to be a gentleman's butler.

About four miles east from Mungger are five pools lined with brick. One, containing a fine spring of hot water, is called Sitakunda; the others contain a little dirty stagnant cold water, which seems to be entirely supplied by the rains, and are named the Kundas of Ram, Lakshman, Bharat, and Satrughan, after the husband of Sita, and his three brothers. No mention, it is said by the Pandit, is made of this place in the Ramayan of Balmiki; but the priests say, that an account

is given of it in the Kurma Puran, a part of the 18 alleged to have been written by Vyas. The legend as usual is curious enough, as showing the inconsistency of the Hindu stories. Ram, (Bacchus,) after having killed Ravan king of Langka, was haunted by the constant appearance of that prince, who, although a Rakshas or devil, was a very holy Brahman, and on account of his piety was served by the gods as his menial servants. Ram, in order to expiate the crime of such an atrocious act, was desired to travel as a penitent until he met all the gods and obtained a pardon. In order to procure this meeting he and his wife and brothers came to Kashtaharani, where they knew all the gods would be assembled to bathe. Here he obtained a remission of his sins, and he is said to have left the mark of his foot at the place. There is indeed a kind of representation of this impression on the rock, but it has been made so lately that the Pandits cannot allow this part of the story, which may probably be 20 or 30 years before it gains full credit.

On this occasion the gods seem to have been rather severe, as while they accepted of fruit from Ram and his brothers, they rejected the offering of Sita, alleging, that they suspected her having been unfaithful to her husband, when she had been in the power of Ravan. Previous to this the goddess, who was perfectly innocent, had allayed the jealousy of her husband by undergoing a fiery ordeal; yet the gods determined that she should undergo another before they would eat from her hand. This trial she suffered, where the hot spring now is, throwing herself into a pit filled with fire, and when she came pure from its flames, warm water flowed from the rock, as it continues to do at this day. The only authority for supposing that this legend is contained in the Purans is that of the Pandas or priests of the place; and that is, I confess, next to nothing. Since last year they have contrived to invent a miracle. They say, that during the last hot season, the water of the well having become so cool as to admit of bathing, the Governor sent orders to prohibit the practice, because it rendered the water so dirty that Europeans could not drink it. But on the very day when the bricklayers began to build a wall, in order to exclude the bathers, the water became so hot that no one could bear to touch it, so

that, the precaution being unnecessary, the work of the infidels was abandoned.

The officiating priests or Pandas are Maithila Brahmans, and amount to 100 houses; but the profits are divided into 60 shares, some of which are subdivided. None of them have studied the Sangskrita language, and the only sort of science that they possess is a knowledge of the legends respecting the place, and some forms of prayer, both acquired by rote. Most of the 30,000 people who bathe at Kashtaharani repair afterwards to Sitakunda, and worship there; and on the birth day of Ram about 1000 people assemble to celebrate the memory of that event. Besides vast numbers of travellers by land and by water and pilgrims resort to the place, so that the offerings are pretty considerable; but they are divided among so many, that in general the Brahmans of the place have only a scanty subsistence. They possess some land, for part of which it is commonly said there is no title. In the year 1803 I visited the place, and found the Brahmans very importunate beggars, and difficult to satisfy, as they rejected with scorn an offering of five rupees; but this year (1811) I found them very modest, and thankful for the same money. This, I am told by my native assistants, proceeds from their having known nothing about me when I visited them first, and from their being afraid when I saw them last of the result of my inquiries.

At Vikramchandi, near the town, is a hole in a rock sacred to Chandi, the Gramadevata of the place, and covered by a small building of brick. This goddess was courted by two of the most powerful sovereigns of India, Vikrama and Karna, who are here considered as having been contemporary. Karna, in order to procure the favour of this goddess, hit upon the happy expedient of tormenting himself by a daily immersion of his body in boiling butter; and by this means he every day procured 1¼ *man* of gold, which he distributed to the poor. Vikrama, jealous of such favour shown to a neighbouring king, came in disguise, and entering the service of Karna, found out the manner in which his rival worshipped. He then determined to excel, which he accordingly did by slicing his skin in various places, and having offered his blood to the goddess, he gave himself exquisite

torment by filling the gashes with salt and spices, after all which he went into the bath of his rival. Such a gallant worship obtained the decided favour of the goddess, who has ever since been called Vikram-chandi. There is no image, but the priest (Panda) is a man of some learning, and makes a good deal of money, as he performs ceremonies for almost every pure Hindu in the town, and offerings are made at the temple every Tuesday and Saturday. The most common deity of the villages is Dubebhayharan. This is allowed to have been in Madhyades, or the central kingdom; but the people of the town will not acknowledge that it belonged to Jarasandha king of Magadha. In fact that kingdom has at different periods had very different extents, and this at one time may have belonged to it, while at others it was excluded. In the Mogul government, of course, it formed a part of Serkar Mungger in the province of Behar.

The place called by men Mungger, in the language of the gods is said by some to be called Mudgalpuri or Mudgalasram, from its having been the abode and property of Mudgal Muni, who lived long ago, and is said to have excluded Jarasandha, with whom of course he is supposed to have been contemporary. Others say, on the authority of the Haribangsa, that the town derives its name from a certain Mudgal Raja, one of the five sons of Viswamitra, son of Gadhi Raja, who received this part of his father's dominions; but, when he lived, or who he was, I have not learned. It must however be observed, that in an inscription seven or eight centuries old found at the place, and perhaps more ancient than the Haribangsa, the name is written Mudgagira, or the hill of Mudga, and not Mudgalpuri, or the abode of Mudgal. The existence of the saint and prince of that name is perhaps therefore problematical, as Mudga is the Sangskrita name for a kind of pulse, the Phaseolus Mungo of Linnæus, from whence also the vulgar name of the place is probably derived.

Major Wilford says, that Sagala is another ancient name for Mungger; but I do not know on what authority, and such of the Pandits, as well as vulgar of the place, as I have consulted, are totally ignorant of the name. The remain of antiquity, which according to tradition goes farthest back, is on a hill called Nauyagarhi, south-east about four miles from Mungger. It is said to have been the prison where Jara-

sandha king of Magadha had confined 80,000 of the princes of India, whom in pursuit of universal monarchy he had taken prisoners, and intended to sacrifice to the gods; but fortunately he was killed by Bhim, the brother of Yudhishthir, who afterwards contested the sovereignty of India with his kinsman Duryodhan.

Next to this I find celebrated in this division a Karna Raja, who, as I have said, is by the traditions here made contemporary with Vikrama sovereign of India, and who is here supposed to have attempted, but without success, to have seized on the power of that monarch. With respect to Vikrama such confusion prevails, as appears from Major Wilford's valuable treatise on the subject, in the 9th. volume of the Asiatick Researches, that no attention need be paid to any traditions concerning a person of such dubious existence. This very Karna is indeed one of the persons, who according to Major Wilford is styled Vikrama. Karna, as I have said, paid particular attention to the worship of the tutelar goddess of Mungger, and built a house on the hill now occupied by the elegant quarters of the Commandant, and in the time of Major Rennel's survey by a saluting battery. This hill is still called Karnachaura, and the house upon it was not intended for the residence of the prince, but for the distribution of alms. Two tanks near the hill, are considered as the work of the king and of his wife.

From the time of Karna, until that of Hoseyn king of Bengal, the people of Mungger think that their country was overwhelmed by forest. An inscription on copper indeed found in the fort mentions, that Raja Deva Pal, the third of that family, was encamped there with his victorious army, and had constructed a bridge of boats for a passage, while his elephants darkened the face of day, while the dust from the feet of the horses of the princes of the north spread darkness all round, and while so many princes of Jambudwip attended to pay their respects, that the earth sank beneath the weight of the feet of their attendants. This does not absolutely contradict the opinion of the natives concerning the deserted state of their country for many ages, much less does it support an inference which has been made, of the Pala Rajas having dwelt at Mungger. It would appear that the prince was then only passing with his army; and not-

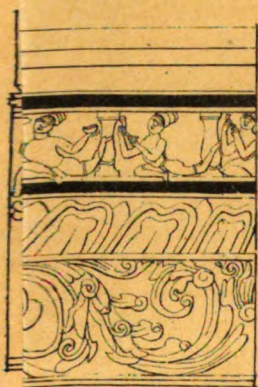
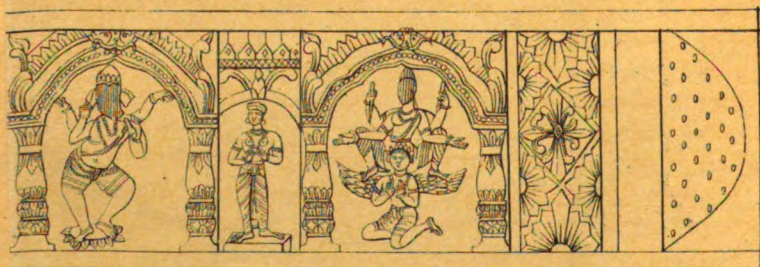



Figure on a Stone in a Bridge between Adyner & Purruah by Veykunt: one exactly similar is built into the north gate of Mungger.

Mungger.

withstanding his boasting, was perhaps returning from the Dinapoor district, where, as I have said in my account of that district, he continued to skulk until the retreat of the Moslems, who had invaded Patna his capital, and had overrun the western parts of his dominions.

Hoseyn Shah, the greatest of the kings of Bengal, extended his dominions on both sides of the river, as far at least as Mungger, and is said to have built the present fort, which, although not strong, has been a very magnificent structure. In the northern gateway, which is built of stone are many materials, that have evidently been taken from ruins, as the ornamented stones are built into the wall without any attention to symmetry, and these ruins have evidently been Hindu, as on a stone of hornblende in mass, which appears to have been the lintel of a door or window, there are figures in the human form, concerning which the men of Hindu lore are not agreed. One end of the stone is hid by the wall, but in the accompanying drawings, *Pl.* 3, No. 1, will be found a representation of what projects, which is the most elegant design of Hindu sculpture that I have yet seen. The execution is however less neat than the design, and the drawing therefore looks much better than the original. On the inside of this gate is also a figure carved on granite, and representing the human form (see *Plate* 3, No. 2). Although this is very rude, I refer it to the same period with the other, and attribute the difference in execution to the difference of materials; for so far as I have seen in their works, the natives of the north of India have never possessed means of cutting granite with any tolerable neatness.

Near a sally port, on the inside of the rampart, the fall of the plaster, by which the building was encrusted, has discovered two stones of almost exactly the same pattern with that at the water-gate, but smaller. These have probably been part of windows; and it is probable, that an accurate examination of the whole wall would discover many such. A very cursory view disclosed several in different parts of the wall, two of which are represented in *Plate* 3, Nos. 3 and 4. The former represents the five great gods of the orthodox Hindus with four nymphs. The latter in a foliage has a human head between two sheep, of which the Pandits give no

explanation. I do not think that the ruins, from whence these carved stones have been taken, can be referred to any other era with so much probability as to that of the Karna Rajas. The other gates of the fort have been covered with carving, but this evidently Moslem work, the carving consisting entirely of foliages, and every stone being suited by its ornaments to fit the place which it occupies with symmetry. The stone employed in these gates is very different from either of the former, and is a material of very small durability.

It is said, that Akbur took Mungger after a severe battle in the vicinity; but so ignorant of history are the people here, that they imagine the prince who lost it, to have been Hoseyn Shah, who preceded Akbur by at least a century. During the whole period of the Mogul government, Mungger continued to be a place of importance, and was the station of a series of officers of considerable rank; but I can learn no account of their names, nor characters. Shuja Shah, the great grandson of Akbur, probably when about to contest the empire of India with his brother Aurungzebe, is said to have repaired this fortress; and at the same time erected lines to the west of it, extending from the hills to the Ganges, and about three coss in length. The channel called Dakranala strengthened these lines towards the west; but the prince built over it a bridge, the largest which I have yet seen in the course of my survey, but very far from being a great work. It is now an irreparable ruin. The fort was again repaired by Kasem ali, who resided in it for a part of two years, while he was on very bad terms with the English. The accommodations in the fort, then occupied by Kasem ali as his public palace, would appear to have been very large; but the greater part has been pulled down, and the remainder so altered, for the purpose of suitably accommodating its present occupants, that no judgment can be formed of the style, in which it was built. The chief mosque, in the time of Major Rennell, seems to have been converted into a powder magazine; but as a building much fitter for that purpose has since been erected, the mosque has become the storehouse of an European trader. A private chapel superior to that at Rajmahal is still pretty entire; but has been deprived of some of the marble by which it was ornamented. The ladies of Kasem-

ali are said to have occupied buildings without the gate leading to Patna, which have been of considerable size; but are of very uncommon clumsiness, and are now ruins.

SURYAGARHA.—Is a beautiful and well occupied country. The southern parts contain, or are skirted by some low hills covered with wood, and are productive of rice, and well planted with mangoes. The western parts, towards the Ganges and Kiyul are finely planted with mangoes and palms; but are rather poor. The plantations are not ornamented with bamboos, but some are surrounded by Sisau trees, that add a very beautiful variety. This practice has also begun in some other parts, but is no where else so common. The eastern parts are low and bare of trees, being deeply inundated, but in spring are covered with one continued sheet of corn. There are two houses and one shop of brick; but the habitations are no ornament to the country, the misery of the villages being too much exposed to view; nor is there any public building worth notice.

The most common village deities are Chandi and Ratnamohan. But these petty gods are here eclipsed by Kshemkarni, who although she has only one place of worship, receives annually from 1,000 to 1,200 goats. The people whom I consulted, knew no older appellation for the country, than that of Serkar Mungger, in the province of Behar, established by the Moguls.

About five miles east from Suragarha is a monument, which like Asurgar in Puraniya, and the Karnagars near Champanagar, and Sultangunj, is in the Hindu style, which I consider as of the greatest antiquity. It consists of a great heap containing bricks, and about 500 yards square. As there is no cavity within, it seems to have been rather a large palace or castle, than a fortified town. It is said, that, until a few years ago a ditch was very observable; but it has been filled up by an extraordinary inundation that happened nine or ten years ago. On the east side of the great elevation is a lower space, about 400 yards square, which contains many bricks; but the surface is very uneven, as if the buildings on it had been detached. East from this again are five or six old tanks, the spaces between which contain some small elevations and bricks. The tanks probably furnished the materials for the whole work, the country round being exceedingly low; and

the buildings now forming little heaps, were probably the abode of domestics. All the people whom I consulted, attributed this work to Parikshit, the second prince of the family of Pandu, which succeeded Jarasandha of Magadha in the sovereignty of India. This family however resided at Hastinapoor, far up the Ganges. Whether or not this be the ruin meant by Major Wilford, (As. Res. vol. 9, p. 109,) and said to have been the residence of a Karna king of Magadha, in the 12th or 13th century of the Christian era, I do not exactly know. It is the only Hindu ruin of any note between Mungger and Suryagarha of which I heard, and it is situated at no great distance to the north-west from the Dahara of the Bengal atlas, the marks by which Major Wilford distinguishes his ruin; but the Dahara of Major Rennell was called to me Dharhara, and could not therefore, I imagine, be the Dahara from which Karna the king of Magadha derived his name; nor have I seen any ruin attributed to such a person.

It is said, that at Abgel, between two and three miles below Suryagarha, there was a Moslem city of considerable size; but the river has there for some years, been making great encroachments, and I could see no remains of buildings on its banks, except a ruinous mosque of brick, and that of an insignificant size. During the former encroachments of the river it is however said, that every year the foundations of large buildings were exposed to view. In this division there have been several small forts belonging partly to turbulent chiefs, and partly to the officers of the Mogul government, employed to keep the others in awe. The whole has become totally ruinous, being fortunately no longer of use.

MALLEPOOR.—This division, where it is properly occupied, is very beautiful, being rich land finely diversified by hills and woods, and the cultivated parts are ornamented with numerous groves of the mango and a few palms, but no bamboos. Besides many scattered hills, there are three very remarkable groups. The largest towards the north, is an uninterrupted chain, which extends east from the banks of the Kiyul, and after running through the northern parts of this district for a long way, turns suddenly to the north, and forms the boundary between this and Tarapoor. Adjacent to the south of this ridge, and separated only by narrow rugged defiles, is an extensive mass of a very irregular form, and

surrounded by a cluster of smaller hills. Each of these has a distinct name; but I could procure no general name either for the whole collection of hills, for the long ridge, or for the large irregular mass; each peak of these however has a name, or rather various names. The next great range is that which overhangs the old castle of Gidhaur, and extends west from thence to a great distance. The third great collection of hills is in the south-east corner of the division. It consists entirely of detached peaks, each having an appropriate name. One of them is called Ganda, which Major Rennell has extended to the whole mass; but, so far as I can learn, this is not in imitation of the natives. All the hills are covered with woods or bamboo growing spontaneously, of which there is a vast quantity; and the woods extend over a great proportion of the level country. In some remote parts the trees and bamboos are of a tolerable size; but in common, if compared with the forests of Nepal, Kamrup, Chatigang or Malabar, they are diminutive. The houses, as usual in the western parts of this district, are no ornament to the country; on the contrary their meanness is very disgusting, nor are they hid as in the eastern parts of Bengal, by hedges or trees. The Zemindars of Gidhaur, although a very powerful family, do not dwell in brick houses; but they have an office for collecting their rents built of that material, as a safety for their papers, and five shops are also built of the same. There is no public work that is any sort of ornament. Mallepoor, the residence of the Darogah and Commissioner, contains about 300 houses, finely situated on the banks of the Angjana river, and not on the Kiyul as represented in the Bengal atlas. Jamuyi contains about 150 houses, among which are the six buildings of brick above-mentioned. Sono contains about 200 houses. No other place can be called a town. The most ancient monument of antiquity is on a hill near the Thanah, where the ruin of some buildings, said to have been erected by the god Ram are shown; but the hill forms a part of the Ramgar district.

Next in antiquity to these, in the opinion of the natives, is the ruin of a town called Indappe, situated a few miles east from the old castle of Gidhaur. I have already mentioned all that I could learn concerning Indradyumna or Indradawan, the founder. The work is pretty extensive, the fort being a square of about 1,650 feet. The rampart of brick has been

about 10 feet thick, and the ditch about 15 feet wide, so that neither could have been intended for any serious resistance to an army; but they were sufficient to guard against surprise or insurrection. The east face is rather irregular, being bent in south from the gate, which is not exactly in the middle, as is also the case with the western gate. In the northern and southern faces are no gates. Before the eastern gate are two heaps of brick, that have been considerable buildings. Within the outer fort has been a citadel. To the left of the passage between the outer gate and that of the citadel, entering from the east, are two considerable heaps of brick; that nearest is said to have been a temple of Siva, and a priapus still remains. On the right towards the north-east corner of the outer fort, are three very considerable heaps, surrounding four smaller. Towards the south-west corner of the inner fort, on its south side, is another heap; and these are the only traces of buildings in the outer fort. On entering the citadel from the esst, you have on the left a mound, which, from its great height is by far the most conspicuous part of the whole building. It is said to have been a place (Chandini), to which the Raja repaired to enjoy the freshness of the evening air; and this tradition is confirmed by the remains of a small terrace of brick, as usual in such places, that has been built on the top of the mound. The mound is however so very great a member of the whole, that I rather suspect it to have been a solid temple of a Buddh; as we know that the Rajas of this part of the country, immediately previous to the Muhammedan invasion, were of that sect. Beyond the mound is the royal palace, as it is called, raised on a lofty terrace 220 feet long by 110 wide. Traces remain to show that this terrace has been occupied by three apartments, where probably the Raja sat in state, while his family was lodged in wooden buildings, that have left no trace. The brick buildings in the outer fort, and without the eastern gate, where probably public offices, and the officers and domestics of the family were perhaps accommodated in buildings of no durability sufficient to leave traces that are now observable. A Brahman, who was cook to Indradyumna, is said to have had a house at Jamuyi, where some heaps of bricks are shown as its remains.

The old castle of Gidhaur is a considerable work. The most common account of it is, that it was built by Sher Shah, who expelled Homayun, and became emperor of India; but many allege, that the founder is totally unknown; and others again allege that it was built by a Hindu officer, who was agent for the king that expelled Indradyumna, and who governed the country for some time, after which the garrison was withdrawn, and the country for many years continued a forest, inhabited by small bands of robbers, who made predatory incursions into the cultivated country towards the Ganges. A description of the ruin may serve to throw some light on the subject. The fort, or rather castle, consists of a square wall, built rudely of uncut stones, taken from the adjacent mountain, and very injudiciously disposed. The stones, by which the walls are faced, are tolerably large; but in place of being built with their ends alone exposed, the greatest extent of smooth surface has been exposed to view, and the interstice between the two faces has been filled up by loose stones, thrown in without the trouble of building, on which account the wall does not possess strength in proportion to its great thickness. The walls, at the middle and angles, are 23 or 24 feet thick at the bottom, and about 17 feet at the top; but in the middle, between the gate, in the centre of each face, and the angles, the wall is narrower by seven feet, owing to stairs being taken from its thickness. The walls seem to have been about 30 feet high, besides the parapet, which has been only intended for the use of small missile weapons, and not for cannon. The projecting works are not higher than the curtains, and there has been no ditch, nor is there the smallest trace of any building for the accommodation of the garrison, which must have been hutted in the area of the castle. At each side of each gateway, in the thickness of the wall, is an arched recess for the security of the guards. The northern and principal gate has been defended by an outwork, but this was probably a more modern work, as it never appears to have been strong, and, having been hastily erected, has fallen to the ground. The curtain between that gate and the N.W. angle has evidently fallen, and has been rebuilt very rudely and hastily, as no flanking projection has been added. A hasty attempt has been also made to strengthen the other gates, by straitening

the passages; and this has been effected by placing, at each side, a column of stone, evidently taken from some more finished ruin, as the column is cut into regular form, and is of a different nature from the rock of the adjacent mountain, with which all the original parts of the castle have been built. The columns are connected by the fragments of others, laid across their tops, and not by a stone cut in the shape of a lintel, as would undoubtedly have been the case, had they been cut on purpose for their present situation. Besides, the pillars are not at all connected with the walls, which they undoubtedly would have been, had they made a part of the original fabric. Three of the gates retain the name of the elephant, horse, and camel; but that towards the east is called the gate of the great God (Mahadeva), and an image is placed at one side of the entrance. This, I have no doubt, shows the castle to have been a Hindu work; nor did the early Moslem kings, so far as I recollect, employ Hindus in commands of trust. I think it most probable, therefore, while Indappe was the usual residence of Indradyumna, that the castle of Gidhaur was his principal stronghold, by which he secured a communication with the fastnesses of the mountains. It is very likely that Sher Shah, in his war with Homayun, he advancing from Behar, and his antagonist from Gaur, may have occupied the castle, repaired it, and taken some of the materials from the more elegant ruins of Indappe.

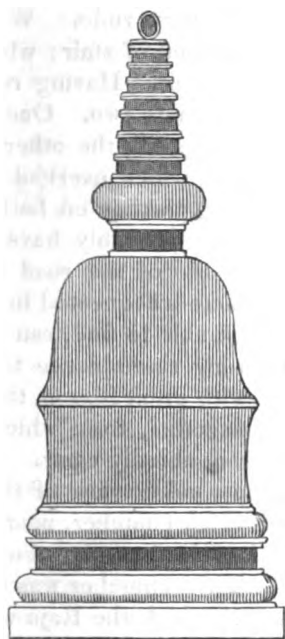
TARAPOOR.—The northern parts of this division are of the same dismal appearance with the interior of Kumurgunj, on which they border, and which have been already described. South from thence is a very beautiful level country, well occupied, and finely planted with mangoes and many palms. It contains a few scattered rocks, that add to its beauty; but is in general low, and well supplied with water, which can be raised by machinery from canals or wells, the water in many places being found a few feet below the surface. The western parts are hilly, composed chiefly of portions detached from the great mass, described in the northern parts of the east division. Among these hills there are many fine valleys, but in general much neglected, both being overgrown with woods of small trees and bamboos. Two other clusters of hills are remarkable. One towards the east is on the

boundary of Ratnagunj and Bangka, and consists of detached hills, each of which has a peculiar name; but the cluster has no common appellation that I could learn. The country to the south of this, and east of the first mentioned cluster of hills, is of the fine nature that I have before described, near the hills being mostly fitted for winter rice, and far from them being fitted for various other crops; but towards the hills are some extensive woods. In the south end of the district is part of the cluster that I have described as belonging to the S.E. corner of Mallepoor. Between these three clusters is a large space, covered with forests, through which it would have been difficult to pass. In this the people are very thinly scattered.

The houses, as usual in the western parts, are very mean. Even that of the Raja of Kharakpoor, although it contains some small portions of brick, is but a very sorry place. Near it, however, he has a very handsome mosque, overhanging the Man in a fine situation, while he is erecting opposite a building that promises to be ornamental, and is intended to celebrate the memory of the grandsons of the prophet. The vicinity is ornamented by the ruins of a house that belonged to his grandfather, and that went to ruin during the insurrection, which he raised against the last remnants of the mogul force. It has been a very large building, and looks more like an old European castle than any thing that I have seen in the course of this survey. The dewan of the raja has also a brick house, the only other one in the division. Among the forests of the interior of this district (Janggaltari) the houses make a still worse appearance than in the open country; not that the huts are much worse, that being scarcely practicable; but the extreme jealousy of the men, in order to conceal their women, has erected a thick fence of the withered branches of trees, that make the most dismal appearance possible, and entirely conceal the huts, which in most other places are rendered somewhat more agreeable to the eye, by being covered with gourds, pumpkins, or a climbing bean. There is no public building of the least note. Tarapoor, where the native officer of police resides, contains two market-places, Bazar Gazipoor, and Hat Tarapoor, with about 200 houses very much scattered. Arjusgunj, the residence of the Commis-

sioner, has more the appearance of a town, and contains about 500 houses, with a neat small mosque in good repair. Kharakpoor, the residence of the owner of the whole division, and of other vast estates, contains about 250 houses. Belwari and Mozuffurgunj, two market places, have each rather more than 100 houses. South from Tarapoor is a very picturesque rock of granite, at a village called Madhusudanpoor or Devghara. On its summit is a small temple, to which none of my Hindus would venture to ascend; although they were very desirous, and although a Moslem laskar showed them an example; but the precipice is tremendous, and the ladders were very bad. It contains no image; but it is said, that formerly it contained one of Narayan. Why this should have been removed, cannot now be ascertained. Lower down the hill is a representation of the human feet, like those on the Jain Temple, near Bhagulpoor, and which, like those, the vulgar call Vishnu Paduka; but they are dirty, and are neglected even by the sect of Vishnu. These may perhaps account for the temple on the hill being deprived of its image.

Gauripahar is a most romantic rock, some miles east from the lofty Lord, and there are at the place two ruinous temples, one of Siva, and the other of his wife. On a rock near these temples are carved some rude figures representing the solid temples, used in the worship of the Buddhists; but I could trace no tradition respecting the persons by whom they were made. One of them is represented on the opposite page. Near it, on the rock, is carved in a modern Hindu character the name Daniyali Saha Daska Sertaz; but the Kanungoe pretends that this was done by the son of a Moslem King, to signify that he was protector of the Kanungoes ancestor. The oldest ruins are attributed to the Kshetauris, who possessed the country before they were expelled by the Rajputs, ancestors of the present Muhammedan family. I shall afterwards have occasion to mention the foul deed more fully, and it would be unnecessary to enumerate the small ruins left by the petty chiefs of the Kshetauris, who were very numerous; but all appear to have lived in brick houses, and to have been somewhat more civilized than the barbarians by whom they were expelled; and they do not appear to have been so turbulent, as round their houses I perceive no traces of for-

tifications; whereas after their expulsion, the country was filled with small mud forts, erected chiefly by the Rajputs, but some also by the officers of the Muhammedan government. The ancestors of the Rajas in particular fortified every pass in the mountains, and whenever they were on bad terms with the government, retired into the narrow valleys among the hills, where they could not be followed by the Mogul horsemen. These works are quite ruinous; and except to destroy them, as nests harbouring banditti, never deserved notice. Having promised so much, I shall here confine myself to describe the works at Kherahi Hill, in the north-east part of the division, attributed to Sasangka Raja, the last chief of the Kshetauris.

At the end of the small ridge named Kherahi, extending nearly north and south, and not east and west as represented in the Bengal atlas, and towards a small detached peak called Nari, is a very considerable space, in which the ruins of houses, built with brick, may be traced, and in this are several small tanks, as usual in Indian towns. From a small market, situated at the north end of the hill, I ascended gradually up its eastern face, by a road formed of flags cut

from the mountain, but very rude. Where the ascent is steep, these flags form a kind of stair; where the declivity is gentle, they form a pavement. Having reached the top of the ridge, the road divides into two. One branch goes south to the second stage of the hill, the other runs north, along the first stage, to its end, which overlooks the market-place. I proceeded first to this, passing on both sides many scattered bricks, where there probably have been many small temples. On the west side of the road I found a flag, on which was cut the characters delineated in the drawing No. 8. No one, that I have been able to find, can tell what character it is; but it has a strong resemblance to the Pali of Ava, which Major Wilford, with great reason, thinks the same with the old character of Magadha, from which country Gautam, the lawgiver of Ava, undoubtedly came. On the end of the hill, commanding a most noble view of the Ganges, are the foundations of a small brick chamber, near which is a flag, on which is carved a mark of the form placed under the characters (see *Plate* 4, No. 3.) This chamber was pointed out by the villagers as the place in which the Raja was wont to enjoy a cool air, but this seems doubtful. Having returned to the other branch of the road, I for a little way ascended the second stage of the hill, when I turned to the left to see a very fine circular well (Indara), which had been lined with brick, and had been at least 16 feet in diameter. A wild fig tree has been allowed to take root, and to throw down the wall, so as entirely to choke the well, which in all probability was very deep. Returning again to the road, and ascending the second stage of the hill, 30 or 40 yards, I came to an image of Priapus, more resembling the object it is intended to represent, than any attempt of the kind that I have seen in India. Immediately above this is a large heap of brick, which is commonly called the Raja's house; but appears evidently to have been a temple, for its size is not suitable for a dwelling, and the steepness of the hill would have rendered it exceedingly inconvenient, except as a place of strength, and there is not the smallest appearance of fortification. This heap consists of two parts, one between the summit of the hill and the priapus, and one on the summit. The walls of the former seem in some measure to remain, but the roof has fallen in, leaving an irregular mass of bricks with a cavity in the centre. Near the priapus a pillar of granite

1.

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J. Netherclift Lithog.

projects from the brick three or four feet; we may form a judgment of the reliance that is due to the reports of the poor neighbours by their supposing that the Raja's elephant was secured by tying him to this pillar. The building on the summit has been immediately adjacent to the other, and some of its foundations, constructed of cut granite, still remain. The walls have been thrown down the hill, where many masses of granite may be seen; and among them parts of doors and windows rudely carved. A Ganes is very distinguishable, and there are other idolatrous figures; but so much defaced, that the particular objects which they represented are not recognizable. This building has been between 20 and 30 feet square. In the hollow between this second and the third and highest summit of the ridge have been several small buildings; and on the third summit, overlooking the lower and southern end of the ridge, has been a small chamber of brick, about nine feet square, with one door towards the N. E., and no window. This the people call the queen's apartment; but we cannot suppose, that even a Hindu lady could endure to be squeezed into such a hovel. It looks more like the den of a hermit. On the whole, I am persuaded that the buildings on the hill have been dedicated to religion, while the Raja dwelt below; and from the appearance of the inscription, in particular, I think it probable that the religious buildings on the hill are of great antiquity, probably coeval with Jarasandha, when the Pali was the learned language of Magadha.

Bangka is a most beautiful territory, there being scattered through it a great number of small detached hills and rocks, finely wooded. The plains or swelling grounds by which they are surrounded are by nature very rich, but have been most miserably neglected, owing partly to the turbulence of former times, which introduced habits not yet overcome, and partly to an indulgence shown to the Zemindars, by whom it has been grossly abused. Near the Chandan river and a few other large streams, however, there is much most beautiful cultivation, with fine plantations of mango trees and a few palms, and in the northern corner a few bamboos. The forests of the west resemble those of Tarapoor, consisting chiefly of a variety of small trees and bamboos, with many Mowal trees near the scattered villages; but towards the east the woods, where not cut, are more stately, contain no

bamboos, and consist chiefly of Sakuya and Asan, both of which, however, are in many places stunted, by extracting rosin or feeding Tasar. Except towards the N. E. the Mowal is there also very common. In the whole division there is no dwelling house of brick nor any public building that is an ornament to the country, or the least relief from the uniform misery of the huts. In the woods these are however hid from view, as in the last division, by still more ugly fences of withered branches and leaves.

Bangka is a poor little town, which may contain 120 houses. Subalpoor and Jaypoor contain each about 200 houses, and Chandan about 100 houses. The Moslems have no place of worship at all considerable. That most attended by the Hindus is Madhusudan, a very modern work, and which seems to have derived its celebrity entirely from a neighbouring hill named Mandar. I visited Madhusudan, concerning which I had heard much, and it was by mere accident that in passing I saw some of the ruins that are near the hill; nor did I discover that it contained anything interesting until I was too far removed to be able to visit it. I was therefore under the necessity of contenting myself with sending an intelligent person, who brought me a fac-simile of an old inscription, and some account of the place. Mandar hill is an immense detached rock of granite, like those on which the hill forts of the south of India have been erected. There is said to be a book called the Mandar Mahatma, which gives an account of the place. Some people told me that it is a portion of the Skandha Puran, but such assertions I know are of very little value; and a Brahman, who said that he had a copy, told me that it was first delivered orally by Kartik to Siva, who again related the contents to Raja Parikshit, who repeated it to Kapil Muni, who published it in writing. The Brahman took the price of transcribing the book, but has not favoured me with the copy. This is perhaps no great loss, as the legend is probably so monstrous as to afford little insight. The oldest buildings are said to have been erected by Raja Chhatra Sen of the Chol tribe, who lived before the time of the Muhammedans; and the Chols were expelled by the Nat, who in their turn gave way to the Kshetauris, who fled before the Rajputs that now possess the country. Inscriptions attributed to the Chol are engraved on the rock at

two different parts, but the inscription at both would seem to be the same. That in the two lines (Plate 4, No. 4) is lowest down, and its letters are about seven inches long. The higher (Plate 4, No. 5) is written in four lines, the letters of which are about an inch and a half long. None of the buildings on the hill are near these inscriptions; but at some little distance from the upper is said to be a very rude outline of the human face, which the people call Madhu Kaitabh; and say, that Madhu and Kaitabh were two Asurs or infidels, who were killed by Vishnu before that god was incarnate. Some way above this is a small temple of Siva. On the summit of the hill are two small temples. One contains six representations of the human feet exactly like those in the Jain temple at Champanagar. The people say that two represent the feet of Vishnu, two those of Saraswati, and two those of Lakshmi. In the other temple was formerly the image of Vishnu, under the title of the destroyer of Madhu (Madhusudan); but it is now empty. Chhatrapati Ray Zemindar of Mandar, as I am informed by his successor in the seventh generation, removed the image to a small brick temple (Dalan) now in ruins, and placed at the foot of the hill. Near this he built a Math, to which the image is carried on the festival, and which, according to an inscription, he erected in the year of Sak, 1521 (A. D. 1589.) Near this also Antikanath, a Sannyasi, took up his abode, and died. His pupil, Achintagiri, built a house entirely of cut stone, which is still occupied by his successors, and is the rudest building of this material that I have ever seen. It is said to have been built about 150 years ago. The image of Madhusudan is supposed to have been made by Ramchandra, one of the incarnations of the god, which it represents. It remained some time at the temple built by the Rajputs, when Rudramohan Das, a clerk in the office of the provincial Kanungoe, removed it to a small building about two miles distant, which has been greatly enlarged by Rupnarayan Deo, a considerable Zemindar now alive. It is an exceedingly rude work, although of considerable size; and the priests, who are numerous, are most importunate beggars.

The two temples on the top of the hill, a stair leading up to them, the inscriptions and some rude carvings on the rock are attributed to the Chol Raja. Among these carvings is said to be a personification of the Kaliyug or degenerate age,

at which the people assembled on the holy day were wont to throw dirt; but the practice was prohibited by a late magistrate, and the people had the good sense and moderation to take no offence. Besides these remains on the hill, ruins are scattered about its foot for above two miles in extent, and are attributed to the Chol Raja. I saw them in passing by mere accident. Between the present temple of Madhusudan and Mandar hill I saw a great many stones and fragments of pillars carved in a very rude manner, but which must evidently have formed a very large building. A small tank at the foot of the rock is called Manoharkunda. On its east side is a stair built of stones, evidently taken from ruins; and near the stair is lying a stone, on which is very rudely carved in relievo the figure of a female deity called Papaharani, or destroyer of sin. It has been very much mutilated, but communicates her name to the tank, which is more usually called Papaharani than Manohar. The scattered stones and bricks of ruins extend a considerable way from Papaharani beyond the buildings erected by Chhatrapati to a pretty considerable tank. Near this has been a temple, which has quite fallen; but the object of worship called Jagatma or Jagadamba, (the mother of the world,) still remains. It is a large flat stone, on which have been carved many figures. The chief has been so much mutilated that I cannot say what it represented, but it probably has had somewhat the form of a woman. West from the temple of Jagatma, very near it, and evidently dependent, has been another smaller one, still pretty entire. In this is the image of a quadruped, with its fore parts turned towards Jagatma. It is said to have represented a cow; but it is so much mutilated and so rudely carved that I think no one can possibly say what animal may have been intended. It is called Kamdhenu. Madhusudan is a place of pilgrimage, to which about 10,000 people assemble on the last day of the solar month Paush (Tiluya Sangkranti), and continue performing their devotions for three days. I suspect much that in this place the worship of Madhusudan has been of no long standing, as I am told that the chief object of the multitude is to bathe in the pools on the hill, especially in Manohar, and to worship Papaharani. So strongly inclined to the marvellous are the people here, that they imagine that there is a stone stair at each side of this tank, and that it contains 11 bigahs

of land. This is at least double the size; and, if the ghats exist in the eye of faith, I may safely assert, that they are invisible to the eyes of the infidel. The people also imagine, that the water of Akasgangga, a pool on the hill, is hot; but I am assured by the messenger whom I sent, a descendent of the god Siva, that the heat is not perceptible to the senses. The priests of Madhusudan are Mithila Brahmans, and the modern inscriptions on the works of Chhatrapati are in the Mithila character.

FAYEZULLAHGUNJ is a jurisdiction of moderate size. Were it in a decent state of cultivation, it is a very beautiful country; but, owing to the neglect of the proprietors, it has in many parts a most dismal appearance. The northern extremity is low land flooded by the river, most beautifully cultivated, and adorned at each end by little hills. Within that is a fine swelling tract, in some parts rather poor, in others of most extraordinary fertility; but almost everywhere very much neglected, especially towards the east, where it is naturally most fertile. Here remain many fine old plantations, but there are vast wastes overgrown with stunted trees or bushes thinly scattered among coarse grass. Towards the S. E. is a low tract called Manihari of very rich land, surrounded by hills, and finely watered, which would have been one of the finest estates that I have ever seen had decent attention been paid to its management. It contains many scattered stunted trees, but the wastes are mostly covered with coarse grass.

Some houses built by Europeans are an ornament to the country, although partly ruinous, partly devoid of architectural merit; but the natives have erected no dwelling of brick, and there are some Troglodytes, who still live in caves. There are two or three miserable brick bridges, but no public work in any degree ornamental. Kahalgang is for this country a good small town, containing about 400 houses rather regularly and neatly built. The only other place that can be called a town is Gajarajgunj, which contains rather more than 100 huts.

Although the Ganges runs almost due north from Kahalgang to Patharghat for about eight or nine miles, and although it not only washes, but surrounds the rocks of the Vindhyan mountains, this place, which on both accounts ought to be

peculiarly holy, is totally neglected, and no assembly takes place to bathe. On the contrary, the people all flock to the opposite side, where the river runs south, and the whole country is a dead level. Both Moslems and Hindus have indeed attempted to take advantage of the rocks, that are now surrounded by the river; and, since they have been separated from the continent, a Fakir has erected the monument of a saint on one, and a Sannyasi has found an image of Priapus on another; but both seem silly fellows. They only go occasionally to these places, and have not resolution or resources to pass the rainy season on the spot; and they have made no progress in bringing their rocks into a source of revenue.

At Patharghat, just where the river turns round to the east, a rock of granite projects into the channel, and has carved on it some figures of gods; but like those on the rocks of Sultangunj they are no longer objects of worship. They are exceedingly rude, and much defaced by time, so that in general the deities, which they have been intended to represent, can no longer be recognised. One of them seems to be Krishna and Radha. On the face of the hill east from thence, and facing the river, is a rock called Chaurasimurtisthan, or the place of 84 images. These are carvings, in very high relief, representing the adventures of Krishna and Ram. The figures are between two and three feet high. There is no tradition concerning these images, nor is any worship paid to them, and the same is the case with 50 or 60 images of all sorts lying scattered about the temple of Bateswarnath, which now attract the whole attention of the pious, and has superseded some old place of worship.

The image of Bateswarnath, until lately was poorly accommodated; but the Dewan of the Collector has lately rebuilt and enlarged the temple. The image is supposed to have been there for many ages, and came to the place without human assistance. The priests denied any endowment, but I find, that they have 25 bigahs, with another priapus (Bushanath), and a temple of Bhairav on the same hill, and a temple in Kodwar, of which I have given an account. The family has divided into eight houses, each of which officiates for a day in rotation, and takes all the offerings that are made, while they officiate. Almost every passenger of pure birth

stops to make offerings, so that each day produces somewhat. About 1000 people assemble to worship at the full moon of Magh, and 500 at the Sivaratri.

At Kahalgang is an old mud fort, the history of which was totally unknown to those whom I consulted.

Paingti.—There are a few scattered hills, and those of the northern tribe of mountaineers bound most of the territory on the south, and would render the scenery very fine, were the land between them and the river occupied and planted; but it is almost totally neglected, and has an exceedingly dismal appearance, being chiefly covered with coarse withered grass and stunted trees. .The islands and low banks of the river, except the town of Paingti situated on the face of a little hill, are almost the only places, in which there is a house; and these, as usual, are very bare, while their cultivation is less attended to than common; so that I have no where seen such a wretched jurisdiction. There is no dwelling of brick, nor any public building, that can in any degree be considered as an ornament.

Paingti containing about 140 house, and Ganggaprasad containing about 100, are the only places that can be called towns. The former is rather a neat thriving place, the latter seems to be chiefly occupied by impudent and querulous beggars, who live by fleecing passengers, while they carry on their plan by complaining of being plundered.

The principal place of worship among the Moslems is the monument of Pir Saiud Shah Kumal, a saint, who, on his arrival at the Paingti, found the place preoccupied by a Pagan Raja of the Nat tribe, who passed a life of great austerity in a cave, that overhangs the river and communicates with sundry subterraneous passages. It being impossible for two such persons to live in the same place, the saints fought, and the Pagan was slain. The Moslem then lived undisturbed at Paingti, and, when be died, was buried on the hill above the cave of his former adversary. When he had been 10 years dead, Bundugi Shah Iyusuf, at Mudinah in Arabia, had a dream, desiring him to go to Paingti, and build a monument to the saint, a school, and mosque, which he accordingly did. The present keeper (Khadem) boasts of being the descendant of the Arab, and enjoys an endowment of 517 bigahs of land, which was probably intended, in part at least, to support the

school; but that is entirely neglected. The monument on the top of the hill consists of the graves of the saint, of his son, of his horse, and of a tiger, covered with brick and plaster, and surrounded by a brick wall, all in good repair. The keeper says, that over the gate there was an inscription, which, about 10 years ago, an European took away by force. The infidel had scarcely removed the stone into his boat, when a storm arose, and would have sunk him, had not he thrown the stone overboard.

The mosque is at the bottom of the hill, on the right as you ascend, and has been a decent building, although of no great size. Some additions were made to it by Captain Brooke, while he was acting against the mountaineers, and it was converted into a barrack for his seapoys. The Moslems have had the good sense to despise the pollution, and continue to worship God, as if an infidel had never entered the temple.

The mudursah or school was built over against the mosque on the left of the ascent. It has consisted of three chambers behind, with an open and wide gallery in front, extending the whole length of the three chambers. These served for the accommodation of the Moulavi, who taught, and through the day the pupils sat in the gallery to receive instruction. The roof has fallen. This school is built over the mouth of a subterraneous gallery (Sujjah), that is said to have led to the cave overhanging the river, in which theHindu saint lived; but the passage has been walled up, a rude chamber under the school having been converted into a powder magazine, when the troops occupied the mosque. This chamber is now inhabited by a Muhammedan hermit, one of the most wretched animals, that I have seen. There is no great assembly at this monument; but both Hindus and Moslems, residents and passengers, make offerings, the place being considered as very holy. Sakaragar is an old fort, about four miles west from Sakarigali in the portion of this division, that is surrounded by Rajmahal. It is said to have been built by a Nat Raja, proprietor of the vicinity, and to be named after his wife Sakara. It contains some brick walls surrounded by a ditch, so wide and deep, that it is called a tank (Talab) ,and is so clear, that the work is probably not very ancient.

At Teliyagarhi, where the hills descend close to the river,

and form the boundary between the Mogul provinces of Bengal and Behar, Sultan Shuja built a fortress, which has been a considerable work, the two extreme gates being about a mile, road distance, from each other. The gates are built partly of stone, the houses within are entirely of brick. At the western gate is lying on the ground an iron cannon of extreme rudeness.

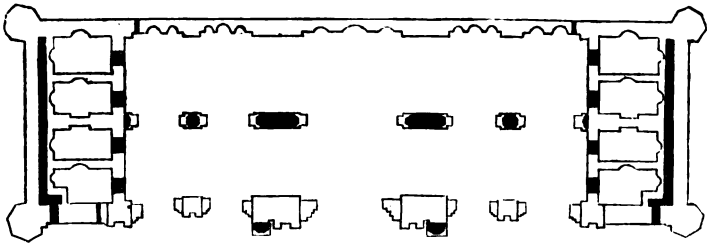
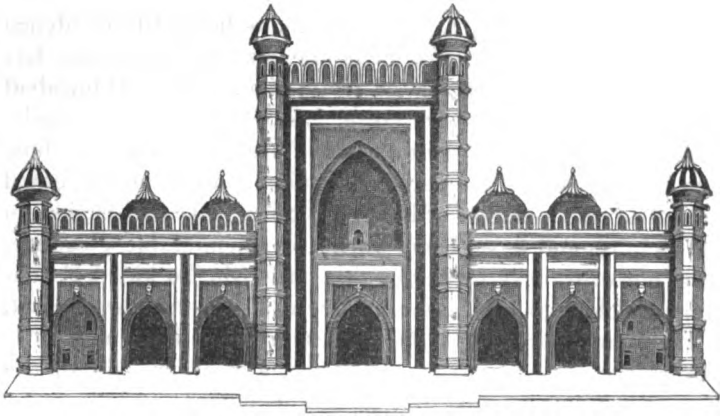
RAJMAHAL is a long narrow strip, extending 40 miles from north to south, and for the whole of that length borders on the northern tribe of mountaineers. The country, at a little distance from the Ganges, in general rises into little swells, and in some places into small hills, and would admit of fine plantations; but there is a great deal of land near the marshes subject to inundation from the river, which under present circumstances is bare. As, however, this is a good deal intermixed with higher lands, and is extremely fertile, the whole district might be made most beautiful, as the hills of the mountaineers are everywhere in full view to diversify the scene, and the lakes add a beauty, that is uncommon in India. In its present neglected state, however, a great part of the division is extremely dismal, especially between Udhwanala and Rajmahal, and between Musaha and Sakarigali, where it is covered with long harsh grass. There are however many plantations of mangoes and palms, with a few bamboos. The woods are all stunted. The residence of a prince of the house of Timur, and of sundry other personages of very high importance, has left behind many buildings, that would have been highly ornamental; had they not in general fallen into ruin; and the 220 dwellings of brick, that still remain, are in general so slovenly as to impress the mind with little less regret than even the common huts of the peasantry. There are two bridges of brick: one at Udhuwanala, said to have been built by Kasem Ali, and another towards Pirpahar. They are both small, and exceedingly rude; and, although still of use, are fast hastening to ruin.

Major Wilford seems to have been able to find some authority, for considering Rajmahal as a place of note in great antiquity, and says, (Asiatick Researches, vol. 9, page 34) that Balaram, the brother of Krishna, after his wars with Banasur, whose residence is still shown near Puraniya, (Purneah) built Rajagriha or Rajamahal, on the banks of the

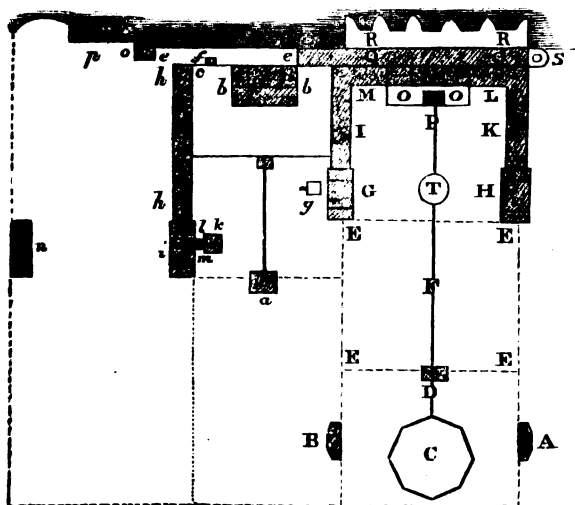
Ganges, which must not be confounded with Patna, the Rajagriha of Jarasandha. I presume, therefore, that Major Wilford means our Rajmahal, which in fact is at no great distance from the city of Banasur, that I have described in my account of Dinajpoor; and near Puraniya I have not been able to trace any work attributed to that hero. The Pandits, whom I consulted allege, that Balaram never was a Raja, and as a descendant of Jadu could not pretend to that distinction, and the inhabitants universally attribute the name of Rajmahal to a very modern period. They say, that Man Singha, when sent by Akbur to settle the affairs of Bengal, selected this as a situation for building a house; and he had begun to build one, the ruins of which are still shown, and had begun to erect a temple, when Futehjung Khan, who had the management of the neighbouring country, wrote to the King, that Man Singha was erecting a palace, which all the Hindus called Rajmahal; that although an officer of the king, he was profaning the town by building a palace of idolatrous worship, and was evidently meditating insurrection. Man Singha had timely information of this letter; and knowing his danger, immediately issued an order, that the new town should be called Akburnagar, and that the temple should be changed into the great place of assembly for the faithful, and called Jomma Musjed. The king receiving intelligence of the Hindu's loyalty, at the same time with the complaints of Futehjung, considered them as malicious. The Hindu and Moslem chiefs lived afterwards on very bad terms, and at length their followers came to blows, and a battle ensuing the Moslem was killed. There is no doubt, that Akburnagar is the name, by which this town is called among the Moslems; but as usual the Hindu title has prevailed. I must, however, observe, that the people of Bengal are apt to attribute a vast many things to Man Singha, in which, I suspect, he had no concern; and that the mosque called Akburabad was undoubtedly built by Futehjung Khan, who probably, therefore, gave the name of Akburnagar to the city. I suspect, therefore, that the name Rajmahal is older than the time of Akbur; although I must confess, that, after a most careful investigation of the place, I have not been able to find any traces of considerable antiquity, nor have I been able to learn one tradition concerning any Raja, by whom it was formerly

occupied. Before the arrival of Man Singha, however, it appears to have been a place of note, as being the residence of Futehjung Khan, who from the size of his works has evidently been an officer of distinction. The Akburabad mosque, although not very large, has been a very neat work; some chambers, and a gate of his house remain, which show it to have belonged to a person of rank; and his tomb is equal to that of the persons of highest dignity, that are buried in the vicinity, and have been works of considerable elegance. It is, however, very probable, that Man Singha killed Futehjung; for bloody feuds between officers of the same government, in the general opinion of the natives, are considered as of little importance, and I suspect, even in the best periods of the Mogul government have not been uncommon.

The house of Man Singha called Huduf, is shown, and has been partly built of stone; but it would not appear to have been a palace sufficient to excite the jealousy of Akbar. The Jomma Musjed is however much superior to the mosque of his rival, and by its magnitude seems intended to have acquired the confidence of the faithful. Although very inferior in size to Adinah, which I have described in my account of Dinajpoor, it seems to me constructed with more taste, and far surpasses any of the buildings that I saw in Gaur. I have therefore given a ground plan and elevation (in the succeeding page). Its outline pleases me more than that of any large native building, which I have seen in the course of this survey; but in this district some of the smaller builings of the Moslems are certainly in a better taste. The execution of the Jomma Musjed is however exceedingly rude, whether considered as a mere piece of masonry, or in the delineation of the smaller numbers of the building. The great temple on the inside, exclusive of the small chambers at the end, measures 188 by 60 feet, which will serve as a scale for the drawings. This building has no endowment, is fast hastening to ruin, and is no longer a place of worship.*

* Unless drawings be made of the various temples and antiquities of India, in a few years more not a trace of them will be extant. [ED.]

Rajmahal, during the whole time of the Mogul government continued a place of importance, although I was not able to trace the succession of its governors, the people being sunk into the most brutal state of dissipation and ignorance. It was however raised to great eminence, by being made the residence of Sultan Shuja, son of Jahanggir, who governed both Bengal and Behar, for site of the capital of which it is admirable situated. This prince at first, took up his residence in the palace of the kings of Bengal at Gaur, which to his ancestor Homayun had appeared a paradise; but what appeared in that light to the hardy Tartar, was probably considered by his luxurious descendant as a dungeon; and even for his temporary residence it became necessary to erect a building of greater splendour. This now called the Sunggidalan or stone hall, although in a miserable state of ruin and dilapidation, still contains traces to show that by its

magnitude and numerous accommodations it was fitted for the abode of any prince; and a view of it evinces the height of magnificence to which the family of Taimur had arrived, when such enormous buildings were required for the temporary accommodation of one of its sons, when employed at a distance from the capital.

A great deal of the building has been pulled down for its materials, especially for its stones, which have been employed to erect the palaces of the Nawabs at Moorshedabad; and much has been removed to make room for modern hovels; but a survey of the remains, and the accompanying sketch

Ground plan of the ruins of the Sunggidalan at Rajmahal.

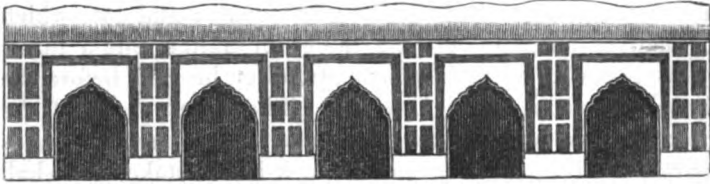
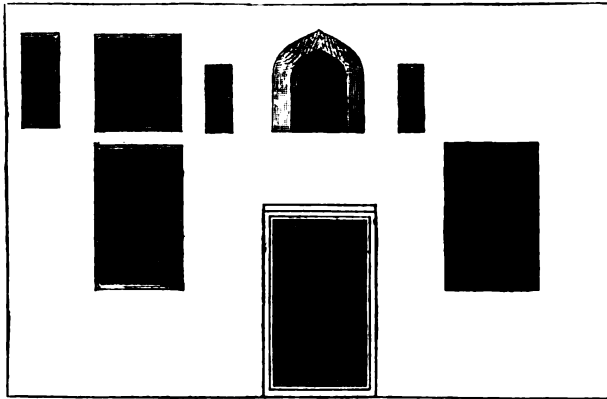
will justify what I have said. Near the ruinous inn, which I am assured occupies part of the situation of the palace, may be observed two gateways (A B) which, as usual in Muhammedan buildings are very large and handsome. Entering by the eastern one (A) the visitor probably came into a court, in the centre of which was an octagon reservoir for water (C) each side 32 feet in length, and constructed of brick. The water was conveyed to it by a narrow canal of the same materials (F) which seems to have been formed in the middle of an elevated walk, that led by the right of the court to the

interior of the palace. On this road, at no great distance from the reservoir, has been a smaller gateway (D) leading into another court (E E E E) which was nearly square, and extended to the wings of the principal court of the palace. This court is intersected from north to south by the road, and no remains of buildings can be traced, although some probably existed.

The great court of the palace was surrounded on three sides by buildings of brick, two stories high, which consisted of a great central building (N N), with two great wings (G H), connected by four lower ranges (M L I K). The central building had before it a terrace (O O), in the middle of which was a square reservoir (P), from whence the water fell into the canal, and was conveyed into another octagon reservoir near the entrance of this court, from whence again it passed through the canal into the reservoir (C) in the outermost court. This great central building, evidently the most ornamented part of the whole was in the upper story divided into three apartments, a large one in the centre, and a smaller at each end; but the three rooms communicated by very wide and lofty arches. The lower story of this must have been very dismal. Under each end room it is divided into two by a longitudinal wall; under the centre it is first divided into four by transverse walls, and then the two middle divisions are each subdivided into two. The interior decorations of this building can no longer be traced, but the plaster on the outside has contained wreathed mouldings in a good taste. Each of the two great wings on the upper floor, has been divided into three chambers as in the centre, only smaller. The lower buildings (I K L M) by which the three great ones are connected, have been subdivided into a vast number of apartments, that, owing to rubbish, dirt, and disgusting and dangerous reptiles, it would be difficult to trace. Between the farther buildings of this great court and the river has been a row of apartments, or at least arched passages (Q Q), communicating one side with the lower story of these buildings, and on the other with a terrace (R R) overhanging the Ganges, which is called the Tukht. The greater part of this has been undermined, and has fallen into the river in immense masses, so that the form in the plan is laid down, from what I judge it may have been from some fragments that remain entire, but are not sufficient to

enable a plan to be traced with accuracy. At the east end of the row of buildings (Q Q), is a great well lined with brick, through which the river water was raised by machinery to supply the palace, and the jet d'eaux, that were undoubtedly in the reservoirs, of at least the great court; and into which the natives imagine that the ladies of Sultan Shuja threw themselves with all their ornaments, when he fled before the victorious troops of his brother. The great court of the palace is considered by the natives as having been the ladies apartment; but I am convinced that it is a mistake, as I shall afterwards have occasion to show. I see nothing about these buildings marking that cautious jealousy, with which the Muhammedans watch this precious commodity. I am persuaded, that the great court is the place where the public entertainments were given, and all round the cornices of the buildings are fixed rings of stone, to which the sides of a canopy could be fixed, so as to shade the whole court.

Returning to the reservoir were we first began, and passing the gate (B), the visitor comes into another court, where most of the buildings have been destroyed, having probably been small places or huts, for the accommodation of troops; but turning to the right, you come to a gateway of considerable size (*a*), which is called Mojragah. Immediately within this is another great court, having in front of the gate an elevated terrace (*c*, *c*, *c*, *c*,) on which is erected the Dewan khanah, where the sultan and his officers sat to administer justice, transact business, and give audience. Those who were admitted to this honour, began their prostrations at the Mojragah, and continued frequently to repeat them as they advanced to approach as near the royal person as the etiquette permitted. The Dewan khanah (*b b*) is the part of the building that is in a state most fit to give an idea of the whole, the walls being entire. It is true, that the cornice has been injured by a new roof added by Mr. Dickson, who covered the building, then very ruinous, and has preserved it as a treasury, for which it still serves, although it has again become ruinous. It consists of an open gallery extending the whole length of the front, and behind this of three apartments which are very dark. This building is only of one story, and next to the central part of the first great court

has no doubt, been the highest finished part of the whole. The view of its front will probably induce the reader to

conclude with me, that whatever may have been the magnificence of the palace, its elegance was on a very confined scale; and this will be farther confirmed by the drawing,

which represents the finishing of one side of the room (*d*), at the east end of the Dewan khanah, where the original plaster remains perfectly entire. The east side of the court of the Dewan khanah is shut in by the buildings (G I), which form the west side of the grand court; and the covered gallery (QQ) extends so far along its back, as to form a communication with the back of the Dewan khanah, and with a low terrace (*e e*) between that and the river, to which at its east

end there is a descent by a small stair *(f)*. On the right, entering the court of the Dewan khanah, is a small square terrace (*g*) on which, it is said, the officer called Dewan sat, while the Sultan gave audience, but it does not seem suited for such a purpose, as it appears to have had no shelter.

The east side of the court of the Dewan khanah consists of a low range of buildings (*h h*), which communicates with one consisting of two stories (*i*), the upper as usual, divided into three apartments. This has no windows towards the court of the Dewan khanah, but behind it is a small room (*k*), which has a door towards that court, and communicates by a passage (*l*) with the interior of the building. On the outside of this passage, facing towards the gate and guard-room (*a*), called Mojragah, are niches apparently intended for the accommodation of a guard. This passage seems to me to be that by which the prince passed into his ladies apartments; and these, I presume, composed a third court, bounded on the east by the buildings (*h, h, i,*) of the court of the Dewan khanah, and on the west by a similar row, of which the greater part has been removed, to make room for a bungalo built by an European; but the building (*n*), which formed its end most remote from the river still remains, and is exactly similar to the one (*i*) opposite to it. If this was really the abode of the ladies, large walls no doubt surrounded it; but of these no traces remain. Towards the river this interior court had some small buildings, two of which are still pretty entire, but so much transformed and concealed by the additions of some Goth, that their original form can be scarcely traced. The one most highly finished is a small oratory (*o*), 18 feet by 12 on the inside. Its front consists of white marble tolerably polished, and neatly inlaid with pious sentences in black marble. The *minars* or columns at the corners have been built into the walls of a room, where the Goth probably swilled cool claret, and which from its neatness would have deserved some credit, had it not totally destroyed the face of the building against which it was erected; for these minars are the most ornamental parts of Moslem temples. The interior of the oratory has been totally preserved, but has always been clumsy, the marble extending only a little way up the walls. The only injury that the interior of this chamber has suffered, is that in repairing the roof, the Goth has removed the

ceiling, and left the beams staring in all the bareness of Anglo-Indian architecture. The other parts of the outside he has also completely changed, by adding a bath to one end of the oratory, and by white-washing the whole; but the rain has begun to remedy this, and shows that the outside has been painted, and enamelled with very gaudy colours. East from this oratory, and overhanging the river, is a small building, where the prince and his ladies are said to have sat while enjoying the fresh air that blows from the water. This originally consisted of three long narrow apartments, which the Goth to increase accommodation, has divided into five. That in the centre was open at the sides, where the roof was supported by little clumsy pillars and arches of black marble; but it has a pleasant situation, and the ceiling has been very neat. The two end apartments were very long with small windows, through which alone the ladies were probably allowed to peep. These have been cut down to the floor and enlarged, so as to admit a ventilation necessary in such a climate for European existence, and the whole has been surrounded by an open gallery, which added much to the comfort of the accommodations, but was not much suited to the taste of the original building, which in fact should have been left undisturbed; and the gentleman might have been much better accommodated, and on more reasonable terms, by a building entirely new.

Although the palace derives its name from stone, no great quantity of that material seems to have entered its composition. The doors, windows, and a row next the foundation of the chief part, seem to have been the whole, and the removal of these by cutting them out of the wall, seems to have been what has principally reduced a very strong and massy building to such a wretched state of decay. At a considerable distance south-west from the Sunggidalan is a ruin called the Phulvari, or flower garden, which some attribute to Sultan Shuja, and others to a Hasunali Khan, who was Faujdar or governor of the place since the time of that prince. It consists of several brick houses, each of such a size as is usually occupied by the chief European officers of the Bengal government residing in the country, and placed at some distance from each other, in a fine grove of mango trees. Its size is no doubt suited for the abode of a person of high

rank; but it retains no traces of elegance. Near this is the tomb of Bukht Homa, widow of a Shayesta Khan, who is said to have been an aid-de-camp (Mosaheb) to Aurungzebe. It is certainly the building of best taste in the place. A square space, containing perhaps three acres, has been surrounded by a neat brick wall, consisting of a series of arches filled up by a small thickness of wall, which produces a very neat effect, and saves materials. At each corner is a neat octagon building, the lower story as high as the wall, the upper covered with a dome, and having in each side a wide arched window. In the middle of one side is the entry by a lofty, wide, and handsome gate, which is arched and ornamented with a dome and minarets. The area is planted, and in the centre is the tomb, which is square, with an open gallery of three arches on each side, and a small chamber at each corner. The building is adorned at the corners by four minarets, too low, as usual here, but in other respects neat. The tomb in the centre is covered by a dome of brick; and each of the corner apartments is covered by a wooden cupola with eight windows. These cupola, the upper parts of the minarets, and the whole cornice are painted with very bright colours. On the cornice, especially, is a row of fine blue Iris, very gaudy, but exceedingly stiff. Although this tomb has a considerable endowment, it is fast hastening to ruin, and the condition of the ground is exceedingly slovenly.

Some way south from thence is another monument, nearly on the same plan, but not so fine, although I was told by the keeper that it contains the remains of Merza Muhammedbeg Subah of Bengal, and father of Alaverdi Khan, who succeeded to that high office. South a little from thence was Nageswarbag, a palace built by Kasem ali, Subah of Bengal, and which seems to have been intended entirely for a luxurious retirement among women, as it contains only one set of apartments, within which most assuredly no man but himself could have been admitted. The situation is remarkably fine, on a high ground commanding a noble view of the great lake, of the hills, and of a very rich intermediate country. The building has been large; but, so far as I can judge, very destitute of taste. It consists of an immense wall of brick, perhaps 30 feet high, and 500 feet square. At one corner is an aperture by way of entrance, fortified without by walls and

guard rooms, which were intended for eunuchs; the places for the guard of cavalry being without. All round the inside of the wall ran a row of apartments, each consisting of a small court open above, and surrounded by small dark hovels, like pigeon holes, in which the ladies and their female attendants might have been crammed. The roofs of these apartments formed a walk, concealed by the upper part of the wall; but there are in this some small holes through which the ladies may have been allowed to peep. These apartments communicated with each other by an arched gallery, which surrounded the interior court. In the centre has been a square building, chiefly of wood, somewhat like the garden house of Hyder at Seringapatam. It was called Rungmahal, or the painted hall. The outside of the wall seems to have been surrounded by a row of sheds, which it is said were intended for the accommodation of a guard of cavalry, and of the male domestics. Kasem ali never occupied this house, having been put to flight just as it was finished. Some troops, that soon after came to check the incursions of the mountaineers, took up their quarters in and near it; and, although built only 57 years, it has been rendered a complete ruin, by taking away the timbers of the roof to build the house of the Nawab Rokunuddoulah, who lives at Rajmahal.

In the town is the tomb of Mirun, eldest son of Jafur ali, the successor of Kasem. This young prince was killed by lightning. His tomb is in the same style as the others, but inferior in size. Some attention is, however, paid to keep it neat, as many flowers are planted in it, and as the remainder is cultivated as a kitchen garden; and even onions and carrots look better than the rank weeds that usually spring in such places. These are the principal monuments in or near Rajmahal, but there are many small mosques and monuments too numerous to be mentioned here, although in other parts of the country I have noticed some that are of less size; because, from the scantiness of any thing except hovels in their vicinity, they have become of importance in the eyes of the people, who have seen no better. Rajmahal has no doubt greatly diminished since it was the seat of the government, which ruled the whole of Bengal and Behar; it has lost even in consequence since the courts have been remove

from it to Bhagulpoor, still, however, it is a large place; but the ruins and the scattered manner in which the town now stands, renders its appearance very dismal. The officers of police maintained, however, that it still contains 20,000 houses and 50,000 people, but even the latter seems greatly exaggerated, although it is in no proportion to the number of houses which they state. On inquiry, I found that it still contains 12 market places, scattered over an immense extent. On applying to the owners for an account of the people belonging to these market places, they gave me a list of 1285 houses; but this is probably as much diminished as the other account is exaggerated. Besides in villages, scattered in the places between these market places, there are a great many houses, so that I do not think that the population can be less than from 25 to 30,000 persons; and the number of travellers by land and water is generally very considerable. The supply of these with necessaries is, indeed, the chief support of the town. Atapoor, containing about 500 houses, and Kaligunj, containing 600, are the only other places that can be called towns.

PHUTKIPOOR.—At the northern end of this division is one small hill, and a long marsh extends along its western side. The greater part of it consists of land, that is constantly undergoing changes from the action of the Ganges, and very bare, although fertile, and tolerably cultivated. The inland part, belonging mostly to invalids, is miserably neglected, and exceedingly dismal, being mostly covered with long harsh grass. There is no dwelling house of brick, and no public work deserving notice.

TURROKHABAD.—The whole of this district is level; and some of it, owing to the changes produced by the Ganges, is rather bare; but in general it is tolerably occupied, and, where exempted from the influence of the river, the villages are finely sheltered with trees and bamboos, as in Bengal. There is no house, nor temple of brick, nor any public work, that deserves notice. Kharidangra and Jamur, containing each about 100 houses, are the only places that can be called towns. There is no remain of antiquity.

PRATAPGUNJ.—This country is all level, and a great part of it inundated; but, except in new-formed land, the villages

are finely sheltered with trees and bamboos, and a very few palms. It contains several small lakes or marshes, that never become entirely dry. The largest are at Chandakuri and Tarapoor, the former containing 1500, and the latter 1000 bigahs. It contains seven private buildings of brick, partly dwelling houses, partly chapels. There is no public work of any note. Shumshergunj, containing about 200 houses, is the only place that can be called a town. No remains of antiquity.

AURUNGABAD.—The country resembles the division last described; but contains no marsh nor lake worth noticing. There are two dwelling houses of brick, but one of them is ruinous. Five persons have brick chapels within their premises. There is no public work that is at all ornamental. Jafurgunj, containing about 100 houses, and Kaligunj containing about the same number, are the only places that can be called towns, although Manggalpoor, which contains about 60 houses, might be considered as a part of Kaligunj, as the two places are nearly adjacent.

At Mahishali, Basudevpoor, and Tangtipara are three tanks, which many allege to have been dug by Mahipal Raja; but on the spot I found the first attributed to a Mahes Raja, a person of the low tribe of Tiwars, to whom this part of the country is said to have at one time belonged. The greatest length of this tank, being from east to west, it has in all probability been dug by a Moslem. The people again of Basudevpoor attribute both their tank and that of Mahishali, to Viswakarma, the god of artists, who instructed the Chinese and Europeans in all their arts. The tanks are far from being worthy of such a personage. At Manggalpoor are some ruins, apparently those of a small town, which is generally admitted to have been the residence of a son-in-law of Lakshman Sen, king of Bengal. Some of the neighbouring Zemindars, as will be afterwards mentioned, claim a descent from this person. Among the small tanks and heaps of rubbish is a small piece of water called Jivatkunda. Formerly, it is said, any dead body might have been restored to life by being thrown into this pond; but, since the country has become subject to infidels, the water, it is certain, has lost its virtue. It is also imagined, that in this tank there is

a throne of stone (Merh); but in December, when I visited the place, it was not visible: the people said, that it would be seen in spring, when there would be less water.

KALEKAPOOR consists of two portions, separated by Virbhum; and each of these again consists of a small space well cultivated, and of a great tract almost totally neglected. The villages are more naked than is usual with those inhabited by Bengalese. Another portion is almost in a state of nature, and mostly covered with forests, which are kept stunted by frequent cutting for fire wood. A little towards the north-east is inundated, but in general the land is high though level. All Ambar is free from hills, but there are a few scattered through the wastes of Sultanabad. Both of the Zemindars have some brick buildings in their houses; that of Ambar is very decent, and is gradually improving by additions, made as the owner can afford. Several farmers have small brick places of worship, which they keep in neat order. There is no place that can be called a town, Virkati is the largest; nor is there any public building that deserves notice. Near Virkati are many small tanks, as if there had been a considerable town; but I see no traces of buildings, nor is there any tradition of a town having been in that situation.

CHANDRAPOOR.—In the year 1796, many robberies having been committed in Virbhum, then under the magistrate of Moorshedabad, and it being pretended, that the perpetrators belonged to the southern tribe of mountaineers, Mr. Brooke, then magistrate of Moorshedabad, applied to Mr. Fombelle, then magistrate of Bhagulpoor, to check the inroads. Accordingly a thanah was established at Chandrapoor, and a small portion of Virbhum was placed under the superintendence of a Darogah.

LAKARDEWANI.—The country is naturally beautiful, as it consists of very rich lands, finely interspersed with detached rocky hills, that are covered with wood. Near Nuni these form a small cluster; but in many directions it is intersected by level passages. The country, however, has been miserably neglected, and is overrun with forests, and the houses are very mean. The most usual fences, as in Bangka, are formed of dry branches and leaves, so as to conceal the huts altogether. The forests, as in the adjacent parts of Bangka,

consist chiefly of Mowal about the villages, and of Sakuya and Asan in more remote parts. Many of these trees are stunted by extracting rosin or by feeding Tasar; but in some parts the trees attain a tolerable size. There are only a few bamboos. The cultivated parts are finely planted, with mangoes chiefly, and a few palms. There is no house of brick, nor any public building deserving notice. Kengduya is the only place that can be called a town, and may contain about 100 houses. No remains of antiquity worth notice. The northern parts are in the Mogul province of Behar, and the southern in that of Bengal; but the Mogul authority seems to have extended very little into these parts. Several tribes yet remain, who speak languages totally different from both Hindi and Bengalese; and the dialects of both these languages, that are in use, are most miserably corrupt, or rather unimproved. The southern parts are considered as belonging to Anggades.

TERRITORY BELONGING TO THE MOUNTAINEERS.—There still remains to be described a large portion of the district, which is not included in any regular divisions established for the administration of justice, or preservation of order: because it is occupied by mountaineers, who are exempted from the ordinary course of law, and from all taxes. Causes, not affecting the public peace, they settle among themselves, by their own customs; but they are bribed by annual pensions to give up such as commit violent outrages, such as robbery and murder; and these are punished by the judge, provided an assembly of their countrymen finds them guilty. The territory of the mountaineers may be divided into a northern and southern portion: the former occupied by a tribe, that has an appropriate language, that eats beef, and has not the least vestige of the doctrine of caste; the southern tribe has adopted the Hindi or Bengalese languages, according as these prevail in the low-lands adjacent to their hills; with this they have adopted the spiritual guidance of some low Hindus, and the doctrine of caste; and finally they have rejected the use of beef.

TERRITORY OF THE NORTHERN TRIBE OF MOUNTAINEERS.—It is by far the most extensive, and in general is the best defined, because the impurity of its manners has secured this tribe better from intrusion. In fixing a boundary two

difficulties occur. In the very middle of the division of Fayezullahgunj are scattered some hills, occupied by the mountaineers, who, although constantly traversing that territory, and daily dealing with its people, are exempted from the jurisdiction of its officers. If these could be induced to retire to hills, that are unoccupied, of which there are many, I think it would be highly advantageous. In the next place, in the centre of the territory belonging to this tribe, there is a tract of fertile level land, lying on both sides of a fine river, and undoubtedly belonging to the Zemindar of Manihari, although he pays no rent, and has entirely deserted it; while the only lands, that remain occupied, have been purchased by the company, and are given in part to some of the armed men, that are under the Suzawul. All these persons, and all those, who cultivate their grounds, or whom the Zemindar might send to occupy grounds belonging to him, would be under the authority of the ordinary police, which is likely to produce a jarring of authority, not easily conducted without dispute. I would, therefore, propose, that a person, entrusted with the care of the communication between government and this northern tribe, should reside at Majhuya, in this arable tract, and have the authority of Darogah, over its low-land inhabitants. It may contain 36 square miles of an exceedingly rich soil, and, if protection were offered, might maintain a great many people; while traders, residing in it, would supply the wants of the mountaineers. From Fayezullahgunj to this tract, which is distinguished in the accompanying map by red, while the lands of the tribe are marked green, is a level route, that I travelled, and passes between the hills, that are regularly delineated; while on all other sides it is surrounded by hills closely adjoining, which in general I have not been able to trace with precision. I presume, that this was the route, by which the Mahratta army entered Bengal; although none of the people, whom I consulted, had ever heard of such an event; but in the time of Captain Browne (1772) it was still remembered. The road, however, is much worse, than was represented to that gentleman; for, although so far as Majhuya is tolerably level, yet it is exceedingly strong against cavalry, being narrow and covered with wood; and between Majhuya and Rajmahal hills of a considerable height intervene. The most common passage is by Chaundi, to the summit of

which I found an exceedingly fatiguing journey; and I have no doubt, from traces, which I saw, that this was the way, by which the Mahrattas came; as by the side of the road were collected many heaps of stones, which the mountaineers said their fathers had thrown together by orders of an army, which came that way. They knew not indeed the nation, of which the army was composed, a circumstance in which they were in no degree interested. So far as I could judge, from viewing the country from several hills, there probably might be found many passages through these mountains; but these are so broken by watercourses, that few of them are fit for the plough, and the hills are more easy of access.

The hills in general are two or three miles long, and half a mile wide, and very steep and rugged. Among them there are many springs, and small streams. The villages are neater, and the huts better than those of the ordinary farmers on the plain. In many parts the views from them are exceedingly fine, although the woods almost every where are stunted. This on the hills arises from their being cut and burned after a growth of from six to eight years, in order for the fields to be cultivated. On the plains it arises from the trees being cut for fire wood, which keeps low all towards the north and east; but on the west side there are some forests of a tolerable growth. There are but few bamboos.

The only antiquity in this division is Lakrugar, an old fort in the central arable land, where a Raja of the Nat tribe named Duriyar Singha resided, and governed the mountaineers as well as the Nat, some of whom remain in the vicinity, and seem originally to have been of the same race with the mountaineers. He was driven out by the Kshetauris, who now possess the country, and who had a fort at Majhuya about two miles from the former. Here they resided for some generations, until the father of the present Zemindar, being inflamed with jealousy, excited the mountaineers to murder a Mogul officer. After this the mountaineers, discovering the imbecility of government, became too turbulent for the management of the Zemindar, who was compelled to retire to the low country.

THE SOUTHERN DIVISION OF THE COUNTRY—Is a much more fertile territory than that occupied by the northern tribe, being much less mountainous; but it is less populous, as from

fear of disturbance, it is the hills alone that either tribe is willing to cultivate, knowing that on these the lowlanders will make no encroachment. Except in the south-west corner the hills are low and detached, and roads frequented by carts or oxen pass through them in many directions. Owing to the vast demand for charcoal, on account of the iron mines in Virbhum, the woods are very much stunted. The villages of the hill people are much inferior in neatness and comfort, to those of the northern tribe. There are no traces of antiquities.

CHAPTER III.

POPULATION, EDUCATION, RELIGION, MANNERS AND CUSTOMS, ETC.

In the Fusli year 1209 (A. D. 1802) Government, it is said, ordered a *Khanah Shomari*, or list of inhabitants to be prepared. It was in two divisions only that I procured the result, and the nature of this satisfied me that I had nothing to regret in the want of the record. In forming an estimate of the population I have not been able to rely much on any general statements procured from the natives, because I often found them unwilling, and not unfrequently unable to give me such information as I wanted. I have proceeded in the first place by estimating the number of people required to cultivate the extent of land occupied in every division, having taken into consideration the various natures of the soil and crops, the different quantities of stock, and the various degrees of industry among the people. I have then compared the proportions between the agricultural population and the other classes of society, as given by the natives; but with this I have seldom found occasion to be satisfied, and have endeavoured to correct the numbers in these classes from very minute inquiries made by the Pandit of the survey; because I think his inquiries concerning the various castes occasioned less suspicion than those respecting the number of houses occupied by cultivators, artificers, and idlers, such being immediately and evidently connected with the value of each estate.

It must be observed, that the proportion of land cultivated twice in the year is here much smaller than towards the east, and that in many parts a very large proportion is sown either without a previous ploughing, or with very slight cultivation, while the stock of cattle is strong. On this account, notwithstanding an uncommon indolence and want of skill, one man in general cultivates more land than is done in Bengal. Had I indeed taken the reports of the farmers, I should have in some cases allowed 40 bigahs for one plough; but in such

cases the ploughman does no other work, and people are hired to perform every other part of the labour.

In the Appendix will be found the results of my inquiries concerning the population of this district, together with an estimate respecting some of the causes by which it is affected. A few (500) of the young men, chiefly from Mungger and the villages occupied by invalids, have entered into the regular corps of the army; but this number is so inconsiderable as not to affect the population. A large proportion of the northern hill tribe belongs to a military corps; but as this seldom, if ever, leaves the district, and as many of their women live with the soldiers in cantonments, this does not in any considerable degree affect the population. In fact this tribe is much more flourishing than the southern, scarcely any of whom enter into service of any kind. Many of the people would wish to be considered as by birth qualified for the profession of arms, and on that account most of them excuse themselves from manual labour, at least of any severe nature, but some condescend to hold the plough, and all have farms either free or rented. They endeavour as much as possible to have these cultivated by servants, and prefer much to agriculture the casual employment of acting as daily messengers (Mohasel or Muzkuri). In general they are not well qualified for their profession by personal endowments, and they cannot endure the restraints which European discipline requires. They fill up however the enormous police establishment which is here maintained, and, I believe, would be exceedingly willing to assist any party in a predatory warfare. The men serving in the regular police (Burukandaj) are superior both in knowledge and appearance to those commonly found in Bengal; but those paid in lands for military service are very indifferent. It was reckoned that in the whole district there were 9210 men dedicated by birth to the use of arms, and willing to be employed in this kind of service. Of these only 4045 had found regular employment at home, 1580 had gone to other places in quest of employment, and 1110 strangers were here in addition employed. The military service, therefore, makes very little drain on population. The civil service rather gives an increase of population. In the whole district it was estimated that 1107 men had gone to distant parts in quest of this employment, and that 1260

strangers had here found service. Commerce makes little change on the population. A few Bengalese traders are settled in the wilder parts, but most of the commerce is carried on by natives. The number of boats is very small, and even these are mostly manned by people from the Puraniya district. In fact the people are of a very domestic turn, exceedingly unwilling to go abroad, and at home make very little exertion; but there is in this a good deal of difference. In the western parts near the Ganges, and in the eastern corner towards Moorshedabad, the people are more industrious than they are about Rajmahal, Kahalgang, and through what is called the Janggaltari.

The drains on population are very small, and in general the manners of both women and men are exceedingly strict. Notwithstanding these circumstances, and an uninterrupted peace for a number of years, with a large extent of very fertile territory unoccupied, it would appear from the reports of the natives, that the population is in some places on the diminution, and scarcely any where is advancing with that rapidity which might be expected. For this diminution or slow progression of population various reasons are assigned, and deserve especial notice. The system of premature marriages is carried to a very destructive length, and no doubt contributes to check population; but not to a greater degree than in many parts, where the population has made a rapid increase. The widows, who adhere to the rigid rule of Hindu celibacy, are here more numerous than in Bengal. This however is probably not more than sufficient to counterbalance the superior strictness in the moral conduct of the wives of Bhagulpoor.

The practice of inoculation is almost universal; but the few families that reject it, will in all probability continue obstinately to adhere to their refusal; for it has become a rule of caste. Some of them are Moslems of rank, who adhere to their folly from a knowledge of the doctrine which their prophet taught. The greater prevalence of inoculation in this district than in some of those already surveyed ought to have produced an increase of population; but other diseases are no doubt common, and it is to sickness that many attribute the decrease in the number of people. This I am persuaded is a mistake; for in the first place, the diseases

peculiar to India, especially the Koranda, which chiefly affects propagation, are not near so common as towards the east; and fevers, the most common destroyer of mankind, are not near so common as in Puraniya. In the next place, the most populous part of the district, near Moorshedabad, is just that where these two diseases are the most severe. It is true, that in Rajmahal, Paingti, and Fayezullahgunj fevers are stated to be more common, but they are not near so fatal. The western parts of the district are, for a warm climate, uncommonly healthy, yet many parts there are very thinly inhabited. Fevers in general are not so dangerous as in Europe, and it is only in the eastern corner of the district that a great proportion assume a bad form. This indeed is said to have been only the case for about 17 or 18 years; for until then the vicinity of Moorshedabad was by the natives considered as rather salubrious; but now a sad reverse has taken place, and almost every year there is in that part of the country a severe autumnal epidemic. Every where in the vicinity of the hills and woods the vernal epidemic is more severe than in cultivated plains; but I no where heard that it equalled in severity the epidemic of autumn. Fluxes, pituitous and bilious, are more common in spring than autumn; but are neither very frequent nor destructive. Choleras are far from common.

The people afflicted with both kinds of leprosy are viewed here with the same injustice that follows them in Puraniya. I saw several instances of complete albinos, with weak blue eyes, and white hair. Two of them were children born of parents quite black, and apparently in good health; but the children were weakly. At Tarapoor in this district I saw two dwarfs, both adult men: one of them was 3 feet 9½ inches high, and tolerably well made; the other was somewhat smaller, but he was rather distorted. The different chronical swellings are here much rarer than in the districts hitherto surveyed. Persons who reside on the right bank of the Ganges seem little subject to the swelling which affects the throat, and most of those in the divisions south from the great river who have this disease have been affected during a residence of considerable length on the opposite bank. The people who live on the bank of the Mon river are considered as peculiarly liable to this disease. It is said that Haradatta Singha, a neighbouring Zemindar, dug there a fine well

(Indara,) which was lined with brick. While this well continued in repair the disease is said to have appeared in the vicinity less frequently; but, since the water has become bad, the disorder has become as common as ever. These circumstances would seem to point out a certain condition of the water used as the cause of the disease; and it may be supposed, that the water of the Ganges is purified, by a long course, from the quality that produces this disease, and which seems to be peculiar to the water of Alpine regions. I am however told, that the people of the Northern hill tribe are subject to this complaint, and their hills have nothing approaching to an alpine elevation. On passing the boundary of the Mogul province of Bengal the *Sarcocele* becomes a more rare disease, and seems to diminish more and more towards the west.

In this district the fever, accompanied by an enlargement in the glands of the neck, is very rare; but that attributed to a diseased state of the nose is now exceedingly common and troublesome; for it usually attacks those who are liable to it almost every month, and lasts two or three days at a time. Formerly, as it is said, this disease was not common, and it is for only five or six years that it has become so prevalent. The people of this district, and those of the hill tribes more particularly, are much subject to rheumatism, which seems to be owing to a want of sufficient clothing, and to their supplying the want in cold weather by hanging much over a fire.

As to the condition and manner of living of the people I shall chiefly confine my remarks to the manners of the people inhabiting the more civilized parts on the banks of the Ganges, and who speak the Hindi language. The people of rank here are still more fond than in Puraniya of going out with a numerous attendance, especially of armed men; but in every other respect their appearance is very mean and squalid, and their marriage ceremonies are so enormously expensive, as to render the utmost parsimony on other occasions absolutely necessary. Funerals are conducted on more rational principles, but still are exceedingly burthensome. The practice of hoarding bullion is supposed to be very general, especially among the middle ranks, whose external appearance is in general very mean.

In the three considerable towns of the district, the former

residence of Moslem chiefs, seems to have introduced the custom of building houses of brick, which are pretty numerous. They are in general occupied by traders, and no zemindar has a house becoming the rank of a gentleman. The best are in the parts belonging to Bengal. The brick houses of the towns are in the very worst style, and the meanest that I have seen any where except in Maldeh. Some of them have tiled roofs, but in general they are covered with plastered terraces. The clay houses are of two kinds, one having two stories, and the other only one. The former usually consist of one chamber on each floor, and most commonly it has in front of the lower story an open gallery supported by small wooden posts. The stair is extremely wretched, and indeed the most common means of mounting to the upper room is by means of a ladder. The usual dimensions are from nine to fifteen cubits long, by from seven to ten cubits wide. In the upper room a person cannot always stand erect, the lower is generally six or seven cubits high. There are always wooden doors. The roof is thatched with a frame of wood and bamboos. The walls are not white-washed, nor in Behar, especially, are they well smoothed. The floor is terraced with clay. A house of this kind costs from 20 to 25 rupees, and will last 15 years; but it requires annual repairs. If the roof is burned, the walls are not materially injured, and much of the property in the lower apartment may be saved.

The houses with mud walls and consisting of one story, are thatched, and have no ceiling covered with clay to lessen the danger from fire. These houses consist of one apartment, of the same size with those of two stories, and have seldom any gallery. The roof is in general of the same shape with that in the eastern parts of Bengal, consisting of two sides meeting in an arched ridge; but the pitch is usually very low, and they are commonly of the structure called Chauka, of which I have given an account in treating of Puraniya. In Kalikapoor most of the roofs consist of four triangular sides, forming a kind of pyramid; or, if the house is oblong, the two lateral triangles are truncated. In that part of the country the houses are neater and cleaner than in Behar. Among the woods, many houses have walls of bamboos split and interwoven like a basket. The hovels in form of a bee-

hive are not so common as in Puraniya. They are most usual on the north side of the river, where bamboos are very scarce, and in Fayezullahgunj, where the people are totally abandoned to sloth.

If there is any native house in the district sufficiently large to accommodate a wealthy family, the number must be exceedingly small; and the usual abode of the wealthy consists of a number of buildings, each of one apartment, or perhaps one of the number may contain two rooms. Wherever the owner can afford it, the whole is hid by walls or fences, which are generally very unseemly. The best are mud walls thatched to prevent the rain from washing them away. Bamboos, which in many parts are very cheap, make a neat fence, but it admits of too much peeping. Dry branches, with the withered leaves adhering, are preferred in the woods, and reeds confined by bamboo splits are chosen in the open country. The huts in the latter are usually built close together, and seldom separated by quick-set hedges or gardens, or sheltered by gourds, climbing beans, or other plants, so that they appear naked, and fires are exceedingly destructive. The spaces between the huts are in general as slovenly as in Puraniya. The people here have scarcely any furniture, except bedding, and some brass, copper, and bell metal vessels. Bedsteads are much more common than in Puraniya. The best are called Palang or Chhaparkhat, and their wooden work is somewhat polished, while they have curtains, mattrasses, pillows, and a sheet, and the people who sleep on them cover themselves with sheets or quilts, according to the weather. The next kind, called Charpayi, is very rough, but the feet are turned, and the bottom is made of ropes, wrought pretty close together. These have no curtains, and it is a few only that have a very bad mattrass. The ropes are usually covered with a blanket, a small cotton carpet, or a quilt. The worst kind of bedsteads called Khatiyas, are made entirely of rough sticks rudely joined together, and the bottom is made of straw or grass ropes. A coarse quilt serves for bedding. A few during the floods sleep on bamboo stages. Many sleep on the ground, chiefly on mats made of grass (Kusa), or of palm leaves.

In the parts of this district that belonged to Behar, the fashions of dress are nearly the same as in Puraniya. The

higher ranks of Hindus, even Pandits, have on occasions of great ceremony adopted, in a great measure, the Muhammedan dress. Many of the Brahmins, as in the south of India, wear a cap of cotton cloth dyed, which sits close to the head, and descends with two flaps over the ears. It is a very ugly thing, but seems to be the original dress of the sacred order. In general it may be observed, that the people here, especially the women, are, if possible, more dirty than those even of Puraniya, and that their clothing is more scanty. The poorer women are allowed only one piece of cloth in the year, and it is not woven of a breadth sufficient to hide their nakedness, so that two breadths must be stitched together to make one wrapper, which, after all, is very scanty, and is called a Kiluya, while that of proper dimensions, woven of full breadth, is called a Sare. In the estimate, what is called silk, consists often of the Maldehi cloth, made of silk and cotton mixed. Some cloth of Tasar silk is made use of by women of rather a low rank; but very little of the Bhagulpoori cloth, made of silk and cotton, is used in this district.

Ornaments of the precious metals are not so common as even in Puraniya. The Hindu women usually ornament their arms with rings of coloured lac, and paint their foreheads with red lead. The women of the milk-men, however, and some other castes of labouring people, use rings of bell metal or brass, either for one or both arms. The Muhammedan women also use chiefly rings of coloured lac, of a shape different from those used by the Hindus; but many of them use rings made of glass, such as are worn in the south of India. Both religions give ornaments of tin to their children. The custom of anointing the body with oil in the western parts of the district is not very prevalent; but ploughmen, as almost every where in Bengal, during the rainy season, never work without rubbing their feet. Shoes or sandals are in general use with those who can afford the expense. In the parts of the district towards Moorshedabad, the people, especially the women, are more cleanly; they almost all anoint themselves frequently, and the women use much gold, silver, and shells as ornaments, nor do they daub their faces with red lead, except a small mark at the upper part of the nose. They also make only a few marks of the kind, that in the South Sea Islands is called tatooing; but the women of

Behar are almost as fond of this ornmament as those of Otaheite, especially on the parts that here are most commonly visible. Some new fangled people, however, especially among the women of the Brahmans, begin to think that the black marks disfigure their skins, and these make no more stains than just enough to satisfy the conscience of those who would not drink water from the hand of a nymph whose skin was spotless. Women and children blacken their eyes with lamp-black and oil put under the lids. Men only use this mark of effeminacy at their marriage. The women tie their hair as in Puraniya.

In the Appendix will be found the result of my inquiries respecting the diet of the natives. At Bhagulpoor, Mungger, and Rajmahal, meat is every day to be had in the market; but it is so wretchedly lean, that it is unfit for the use of an European, except for soup. Goat meat is commonly sold, but beef is occasionally procurable. At Mungger, on account of the Europeans, a good many sheep are killed. In the other places very few, as the natives prefer goat flesh. A few young buffaloes, chiefly males, are brought to market. The Hindus of this country, except the very highest castes, would purchase meat from the butcher, could they afford it; but by far the greater part of the meat used in the district, is that offered by the Hindus or Muhammedans to their gods or saints. None of the sect of Vishnu ought to eat meat; but here many of them defer taking Upades until they arrive at a good age, and until then indulge their appetites; and on occasions of festivity do not prevent their wives and children from indulging theirs. There are, however, many that reject meat, and in the table these are included among those who cannot afford it. The helplessness of the people prevents them from procuring near so much game as they might easily have; still, however, this forms a very considerable portion of the meat that is used. The impure tribes in the greater part of the district are not so well provided with pork as in Puraniya.

In some parts of the district fish is seldom procurable; and in most parts there is a considerable proportion of the inhabitants that reject its use. In most parts, near the Ganges, fish is not procurable during the inundation, and it is only in Rajmahal and the divisions south from thence

that there is a regular abundance, or that the people are disposed to avail themselves of this kind of food, so much as is usual in Bengal. This of course greatly diminishes the nutrition which they receive, although they use more meat than is common in Bengal. Milk, however, is a more common article of food than in most parts of India; but it is almost entirely used after it has become acid and has curdled, which very much diminishes its nutritive qualities.

The portion of oil and salt, which the poor are able to procure, is very small. The rich have it in greater abundance, and the wealthy have from two to four curries at each meal. Those in middling ranks have this luxury five or six times a month; and the poorest at their marriage feasts or such high occasions. By consulting the table, the proportions of these different classes may be seen. Oil and salt, capsicum, and turmeric, are the grand articles of seasoning, acids are little employed. The quantity of foreign spiceries, chiefly black pepper, is very small, and the number of those who use them may be seen in the table. Ghiu also, or melted butter, is a luxury, the daily use of which falls to a very small proportion of the community.

With respect to the oil, the quantity considered as a full allowance for five people, young and old, varied in different places from 11 to 50 s. w., the latter in the capital, where much business is done by the lamp. The average is about $20\frac{1}{2}$ s. w. The second class consumes from 5 to $17\frac{1}{4}$ s. w., average $10\frac{3}{4}$ s. w. The third class uses from $2\frac{1}{2}$ to $11\frac{1}{2}$ s. w. average $5\frac{1}{2}$ s. w. The lowest class procures from $1\frac{1}{2}$ to 5 s. w. average 3 s. w. As usual, this allowance contains the whole consumption for lamp, unction and kitchen, and no one can ascertain the proportion; but the higher classes using a much larger proportion for the two former purposes than the poorer, there is less difference in the quantity used as seasoning, than would appear in the above estimate.

The whole of the salt being used for seasoning, the difference in the proportions used by different classes is much greater; but as the rich use three or four dishes, while the poor use only one, their dishes are not higher salted; but their food is much better seasoned, as they have four dishes in place of one, to correct the insipidity of the grain, which forms the basis of their food. The people here never use ashes

to supply the place of salt. Very little of the salt from the coast of Coromandel is here in demand. The quantity said to be abundant for the daily consumption of five persons, young and old, varied in different divisions from 7 to 23 s. w.; but the average was rather more than 12¼ s. w. and the people were commonly divided into four classes as with respect to oil, diminishing in various proportions; so that the second class varied from 4 to 17¼ s. w., average 8 s. w.; the third class varied from 2 to 12 s. w., average 4½ s. w. The lowest class varied from 1 to 5½ s. w., average 3 s. w.

Rice forms the staple article of food with all that can afford it; but the rich sometimes, for the sake of variety, eat wheaten cakes. The poorer ranks must for a great part of the year content themselves with wheat, or still coarser grains. Some of these grains they boil in imitation of rice; but in general they are made into cakes or paste as I have before mentioned, and the paste is often made of different kinds of pulse; but this is not included in the table, where the pulse, stated to be used, is entirely dressed as a curry, and eaten as a seasoning with grain prepared by boiling or as bread or paste. In the wilder parts of the district, some of the poor, for some months in the year, cannot procure grain, and use in its stead the dried flowers of the Mahuya tree (*Bassia latifolia*), the seeds of the Sakuya (*Shoræa robusta*), and some other natural productions. The quantity of cleaned grain stated to be sufficient for the daily consumption of five people, young and old, varied from 72 to 40 s. w., and the average is 52½ s. w. a trifle less than the average of Puraniya.

In some of the divisions, especially Lokmanpoor, Pratapgunj, and Furrokhabad, the proportion of those who drink distilled spirits is evidently underrated, and the same has been done respecting those who drink palm wine in Lokmanpoor, Kumurgunj, and Tarapoor, in the two latter of which, in particular, the practice is almost universal. Everywhere west from Udhawanala, throughout the cultivated country, the palms are plentiful. In almost every part of the district the only spirit used is distilled from Mahuya flowers. The spirits drawn by native artists both from grain and from this flower, have a smell so disgusting, that I have not been able to taste them so as to judge which is the least

execrable; but I have had already occasion to dwell on the advantage that might arise from an improvement of the manufacture. The most execrable quality that can be imagined is no bar to excess; on the contrary it rather conduces to it. This is strongly confirmed by what I have seen here. In no country have I seen so many drunken people walking abroad; and in more than one instance I saw men, who from their dress were far above the vulgar, lying on the road perfectly stupified with drink, and that in the midst of day, and in places far removed from the luxury and dissipation of towns.

Different kinds of betle-nut possess very various degrees of narcotic qualities, but all, like other narcotics, produce an exhilaration and insensibility which accounts for the fondness with which this nut is devoured by nations, that are restrained from using strong liquors. All betle that is not dried, possesses this quality the strongest. The people here using much strong drink are less addicted to betle; for, although a large proportion is said to procure betle in abundance, the quantity called such here, would towards the east be considered as trifling, few using it more than two or three times a day. At the capital eight leaves and two nuts are reckoned a full allowance for the most wealthy.

Fuel in almost every part of the district is abundant, as there is no place far removed either from forests, or from sandy banks overgrown with tamarisks. In fact charcoal and firewood form a considerable part of the exports of the district; yet in almost every part cow dung, mixed with the husks of rice and other grain, forms some part of the fuel, because it is collected close to the house, and costs less trouble to bring home than wood, which may be two or three hundred yards off. Wherever the country is tolerably clear, the poor burn scarcely anything else, except towards Moorshedabad, where they are still worse economists, and burn much straw. In the cold season almost every family burns a fire all night, and sleeps round it. The consumption of lamp oil in religious ceremonies is much smaller, even in proportion to the number of inhabitants, than towards the east. The natives of this district are very fond of a numerous attendance and showy equipage; but their poverty prevents them from vying in this point with those of Puraniya. Camels just begin to appear in the western extremity of this district.

The free male domestic servants of the great are of three kinds: Bhandaris who are stewards, and take care of all the household effects; Khedmutgars, who dress their master, attend him at meals, supply him with tobacco and betle, and make his bed; and Tahaliyus, who clean the kitchen and its utensils, bring wood and water, and buy provisions; but in common one man does everything, and takes care also of the horse, and of any cows and goats that may live in the house. Their wages vary from 8 to 24 anas a month, besides food and clothing. About 1 r. is however the average, the food may be as much and the clothing may be 4 rs. a year. The whole allowance seldom exceeds 30 rs. a year. Female free servants are in general not procurable, and those than can be had are commonly old women, who have lost all their kindred, and attend as domestics for food and raiment. The invalids have in general servants, male and female, whom during their service they either purchased, or acquired by the force of arms. Although such might be called slaves, this word would convey a very different idea concerning these persons, from what is the real case. In fact these boys and girls are looked upon by the old soldier as his children; and when he dies, he in general leaves them the whole of his effects. If the girl acquires a proper age, before the veteran's death, she often becomes his concubine; and many of them as wives, receive a pension from the Company.

Proper slaves of the male sex are in this district called Nufurs, and their women are called Laundis. They are confined to the part of the district included in Subah Behar. In general they belong to the owners of land, chiefly on free estates, or to wealthy Brahmans, who rent land. None of them are employed as confidential servants, such as in Puraniya receive a good farm for the subsistence of their family; on the contrary they are generally very poorly provided, and the greater part of the men are employed in agriculture. Some of them, when there is nothing to do on the farm, attend their master as domestics; others are employed entirely as domestics, and living in their master's house receive food and raiment; finally, others are constantly employed on the field, and these get no allowance, when there is no work on the farm, but are allowed to cut fire-wood, or do any other kind of labour for a subsistence. When old, their allowance

is in general exceedingly scanty, and commonly depends in some measure, and sometimes in a great part upon what their children can spare. If they have no children they are sometimes turned out to beg. The usual daily allowance is about 3 sers Calcutta weight, or about 6 lbs. of rough rice, or of the coarser grains, the great quantity of the husks of the former making it of less value than the latter. The slave from this must find clothing, salt, oil, and other seasoning, fuel, and cooking utensils. His master gives him a wretched hut, where he lives almost alone; for, although he is always married, his wife and children live in the master's house, and there receive food and clothing. The women when young, are usually alleged to gratify their master's desires; and, when grown up, sweep the house, bring fuel and water, wash, beat and winnow grain, and in fact are women of all work. At night they go to their husbands' hut, unless when young and too attractive; in which case they are only allowed to make him occasional visits for the sake of decency. The boys, so soon as fit, are employed to tend cattle, are early married, if possible to a girl belonging to the same master; but sometimes the master has no girl of an age fit for marriage, and cannot purchase, in which case he allows his boy to marry a girl belonging to another master, or a free girl, in either of which cases he gets no share of the children. If a man has a marriageable girl, and no slave to whom he can give her, he allows her to marry another person's slave, or even a free man; but in both cases retains all the children. In general a free man marrying a slave girl is not personally degraded to slavery as in Puraniya; in other places he becomes a Chutiya-Golam *(cunno servus)*, but cannot be sold; he works for his wife's master at the usual allowance that a slave receives. Slaves may be sold in whatever manner the master pleases; but they are not often brought to market. All the slaves are either of the Dhanuk or Rawani castes. Free men of the Dhanuk caste, if very poor, sell their children; but in this district this is not done by the Rawanis. The slaves here are in general industrious, seldom run away, and are seldom beaten.

I have procured no estimate of the mere domestic slaves, either male or female, that are kept by Muhammedans of rank, and of which class I have given an account in treating

of Puraniya. There are no doubt many such, as the chief persons in the district are Muhammedans, and some of them have, I understand, dealt in this commodity to a ruinous length. I saw two Abyssinian boys in the train of one person of rank, and he told me he had commissioned them from Calcutta on account of the character for fidelity, which this nation holds throughout the east. In the division of Mungger alone, I understand, that the Moslems have 50 male, and 70 female domestic slaves (Golam and Laundis).

The number of common beggars, that were estimated to be in the district, amounts to about 4000. I have certainly no where seen this class more numerous; and in general they are real objects. In general they have small huts; and are not destitute of food, so long as they are able to ask for it from door to door; but, when sick or infirm, they are in general totally neglected. Many poor persons, however, lame and blind, are sheltered by their kinsmen, and taken care of when unable to beg; but as their kinsmen are straitened, such are very naturally considered objects of charity, and procure from that source their common means of subsistence. It is those alone, who have no near kindred, that are suffered to perish from neglect; and this is more owing to the doctrine of caste than to a hardheartedness among the people. The Muhammedans are therefore more distinguished for real charity, than the Hindus; and I mention with satisfaction the goodness of Sheykhzayed Ali, a small Zemindar near Mungger, who supplies all the infirm poor, that live near him, with food. Mohan Das a wealthy religious Hindu mendicant of Lakardewani is entitled to the same praise. The number of sufferers is however great, and would shock the most hardened nation of Europe. In general the women of this district have a very fair character. The men are exceedingly addicted to intoxication, and particularly in the interior are very slothful. They are less charitable than in Dinajoor, but less addicted to robbery and theft. Yet there are many pilferers. The men are excessively jealous of their women, which leads to frequent murders. They are also of a most suspicious disposition with respect to the views of every person in authority, which one might not have expected, considering the kindness with which they have been treated, but they are conscious, that their burthens are nothing, and cannot be brought to think, that govern-

ment will preserve its faith. I may venture to say, that no people on earth has less regard to truth than themselves. Their men of business are only remarkable for chicane, in which they are complete adepts. In the interior I found the people uncommonly obliging, and my wants were cheerfully supplied; but everywhere near the great road, I heard of nothing but difficulties, raised entirely for the purpose of enhancing the price to an extent, of which my attendants most bitterly complained.

Education.—The schools for teaching to read the languages spoken by the Hindus, and the progress made are very near on the same footing as in Puraniya, but the number of teachers is smaller. In some parts, however, the Guru instructs the boys only in the mere rudiments of writing and arithmetic, by instructing them to form their letters and figures, on a board, with a reed and white ink, made of powdered mica. The boys are afterwards taught, by their parents, to write on paper, and to keep accounts. The teachers, where the Hindi language prevails, are called Gurus; but, where the Bengalese dialect is in use, they are called Pandits, a name, which in most parts of Bengal and Behar is confined to men of more exalted science.

In by far the greater part of the district the Hindi character and dialect almost universally prevail; except that a few rude tribes still retain languages peculiar to themselves, which, appearing to have derived very little from the Sangskrita, may be considered as pure aboriginal Hindu dialect, these tribes having in their appearance nothing of the Chinese nor Tartar race. The Hindi spoken in the better cultivated parts of the district differs no more from that of Mithila, than is usual in different parts of Puraniya, and the pronunciation is nearly the same. Among the hills and woods the accents vary much, and each tribe, even of those, which have adopted the Hindi dialect, retains many obsolete or strange words, besides an uncouthness of pronunciation, so that many of them are almost totally unintelligible. Even in the part of the province of Bengal, that is contained in this district the Hindi dialect, called Khotta, by the Bengalese, is very prevalent. In Paingti, Rajmahal and Phutkipoor there are more Khottas than Bengalese. In Furrokhabad they are about equal. In Pratapgunj and Auruggabad the Bengalese is by far the

most prevalent. In Kalikapoor and Chaudrapoor, scarcely any speak Hindi. In the north part of Lakardewani the Hindi, and in the south part the Bengalese is the most predominant; but both so corrupted by the accents and uncouth phrases of rude tribes, as to be with difficulty recognisable. The Bengalese usually spoken in this district is of the Gaur dialect, which extends along both banks of the Bhagirathi from Gaur to the sea; but differs considerably in different places. The people of Calcutta, who speak the dialect of Gaur, although confounded by the pride of the west with Bengalese, in their turn, as usual, ridicule the accent of the people of Dhaka, who are the proper Bengalese; and Calcutta being at present the capital, the men of rank at Dhaka are becoming ashamed of their provincial accent, and endeavour to speak like the Babus of the former city. In the southern parts of Lakardewani and Bangka the Bengalese resembles that of Virbhum, which is a part of Augga. The revenue accompts in the province of Bengal are kept in Bengalese even at Rajmahal, where as I have said, the Hindi language is most prevalent.

The Bengalese of this district, as elsewhere, call their polite or poetical language Prakrita, and the books in it, which they most usually study, are those written by Kavikangkan and Kasi Dasi. None of the women can read the common character, and very few understand the poetical language when it is read by others. In this district those who use the Hindi dialect in common affairs, write the Nagri character; and the highest ranks, even the Pandits, both in common discourse and epistolary correspondence on ordinary affairs, employ the language that is commonly spoken, and is intelligible to the vulgar. It is promiscuously called the Bhasha or Desbhasha, and no books have been composed in it. The compositions which they possess, that are not in pure Sangskrita, are all so mixed with that language, as to be unintelligible to the vulgar; and this language also is called Bhasha. The Ramayan of Tulasidasi is the one most used, and is much more read than understood. I am told, that of the 16 people who read it, two may understand it completely; four may understand some sentences; ten understand a great many words, but are ignorant of so many, that they do not know the meaning of any one sentence.

Among the Brahmans and higher classes are some who understand the meaning, although they cannot read any character. This is the case with all the women, who understand the poetical language; for none of the female sex have been instructed to read. The other books in the poetical language that are in most common use, are Harischandra Lila, giving an account of a Raja named Harischandra, the Bhagwat of Lalach Halwai, mentioned in my account of Puraniya; and the Rasvihar, also mentioned in the same account. These three are more easily understood than the Tulasi Dasi, and even the vulgar understand a considerable part of Harischandra Lila. On this account probably it is that they are little esteemed.

The Prakrita, which is supposed to have been the language of Ravan, and of his subjects the monstrous cannibals of Langka, has been, I believe, considered as the same with the old dialect of Magadha. If that be really the case, it has been nearly banished from this part of its original seat; as the Pandit of the mission heard of one Brahman only who pursued its study. This person, Nityananda Jha, of the Mithila nation, resides at Bhagulpoor, and is esteemed as a man emiment for learning.

I have already mentioned, that Major Wilford considers the Pali of Ceylon and Ava as being the ancient dialect and character of Magadha. That language has undoubtedly the strongest affinity with the Hindu and Sangskrita, but the character has been totally lost. I have mentioned one small inscription (see plate 4, No. 8), which, I imagine, is a remnant of this ancient character; but every person in the district to whom I have shown it, alleges that he never before saw any such writing. In this district most modern inscriptions are in the Tirahuti character, but Sangskrita books are usually written in the Deva Nagri. Many people imagine that this is the proper character of the Sangskrita language, but that must be confined to some of the countries, where the Hindi language is spoken. In all other parts of India the Deva Nagri is very little used in writing Sangskrita; and even in Mithila, where the Hindi language prevails, a different character is used in science. I do not recollect any old inscription in which the Deva Nagri is used. All the characters of India, ancient and modern, have many things in common;

but I suspect that the Deva Nagri now in use is a very modern form of the Hindu character.

The state of Persian literature is here much the same as in Puraniya. On the whole, it must be observed, that the people of this district have rendered themselves fully as well qualified for transacting ordinary business as those of Puraniya; but the various offices are not so respectably filled. The men of business in this part, especially in the vicinity of Bhagulpoor, are fond of emigration, and most of those who have any intellect or industry, seem to have found their way to Calcutta, where some of their countrymen, having risen to eminence, afford them assistance. Those that remain, especially in Magadha, my native assistants have found uncommonly stupid. In Gaur and Mithila they are more acute. The education of the Zemindars and other landholders, has been fully as much neglected as in Puraniya. In the plan of education here, science, or any study that can enlarge the views, or improve the heart, has been most deplorably neglected; and the chief object seems to have been to lay in a stock of chicane, in which even the most stupid are very profound adepts.* I have been often tempted to think that the stupidity was feigned, as a cloak for design; but my native assistants, who must be better judges than myself, are of a contrary opinion.

In the Appendix will be found the result of my inquiries respecting the extent of common education in this district, and in the first statistical table will be found a list of the schoolmasters or teachers. The science of the Arabs has not been so totally neglected as in Puraniya. Muhammed Fayek, of Bhagulpoor, is the head of a very respectable family, of which there are now 20 persons, all called Maulavis, and who all instruct pupils in Arabic. Their houses are called Mudursahs. The family has considerable endowments in land, and the Moulavis take no fees for instruction. Their pupils amount only to 40 young men. Muhammed Fayek is a person highly and justly respected by his countrymen, exceedingly affable and unaffected in his manners, obliging and communicative to strangers, and said to be well skilled in Arabic lore.

* Dr. Buchanan forgot that cunning was a vice naturally resulting from oppression amidst a feeble people.—Ed.

In Suryagarha two brothers, Golam Mortuja and Golam Hoseyn, who have a large free estate, have endowed a Mudursah, and employ a Moulavi to instruct youth in Arabic and Persian literature. These two men affect an uncommon sanctity of manners, and avoid strangers; nor do I know what proficiency the person employed by them has made in his studies. Muhammed Hayat, of Bhajuya, near Gogri, has an endowment, and instructs seven youths in Arabic, Persian, and the Koran. He as usual takes no fee, and gives food to such of his pupils as choose to avail themselves of his liberality. Muhammed Fayek says, that none of the Kazis know Arabic or grammar, and that they have made very little progress in a knowledge of the law. In general they know a little of Persian literature; but this is the extent of their knowledge. Many as usual read the Koran, who do not understand a word of it. From the small number of professors who teach the three great sciences of the Hindus, that is, grammar, law, and metaphysics, and who amount to only 14, as will appear from the first statistical table, it will readily be perceived, that such learning is here at the lowest ebb. Three of the professors, I understand, are men distinguished among their countrymen. Besides the teachers, there are in the whole district about 50 persons called Pandits, who have been educated regularly in grammar and law, none of them have studied metaphysics; but most of them, if not all, have a smattering of Jyotish, so as to be able at least to calculate nativities and fortunate times. One of them constructs almanacks. Two have studied grammar, but in general this and the higher sciences have been entirely reserved to the sacred order.

The Brahmans in the western parts of the district have reserved to themselves the exclusive privileges of acting as astrologers, soothsayers, and wise men (Jyotish). In the eastern parts the Daivaggnas of Bengal have made some intrusion on this valuable branch of science, which is here by far the most profitable. Among the 50 Pandits above mentioned, 40 may practise this art, and perhaps 15 more are practitioners, without having received an education that entitles them to the degree of Pandit. The common Dasakarma Brahmans can tell fortunate days for marriages, building houses, cultivating land, or such trifles. These

men can read, but do not understand any composition in Sangskrita. The Daivaggnas of the east possess nearly a similar state of knowledge. Medicine is in rather a more creditable state than towards the east. About 270 Sakadwipi Brahmans and a few Maithilas practise medicine. They in general know more or less of Sangskrita, and have some books treating on diseases and remedies, and written in that language. A great part is committed to memory, and a Slok or couplet is on all quoted as of divine authority to remove all doubts, and to astonish the multitude, who do not understand a word of it. At Bhagulpoor, Mungger, Rajmahal, and Pratapgunj, are men who have regular practice. In other parts they are hired as servants, and receive monthly wages, amounting to from 10 to 20 rupees, partly given in land. In this district I did not hear of any other practitioners of medicine, who possessed any thing like science, except eight men in Rajmahal, partly Brahmans, partly Kayasthas of Bengal, and partly Muhammedans. The Baidyas here have entirely relinquished the profession of medicine. The practitioners who exhibit medicine without having books, and in general without being able to read, are called by various names as in Puraniya. In the whole district there may be of such 600, some of whom are old women.

In the three chief towns are about 20 Jurrahs, who evacuate the water of hydrocele, treat sores, and draw blood both by cutting a vein, and by a kind of imperfect cupping. They are by birth barbers. The midwives are the women of the lowest castes, and merely cut the umbilical cord. The low people, who cast out devils, cure diseases and the bites of serpents, and oppose the influence of witchcraft by incantation, are exceedingly numerous. In some parts the same person pursues all branches of this profession, in others he confines himself entirely to some one. On the whole, there may be about 15 or 16 hundred persons who pretend to a knowledge of this mummery. The low castes, that eat pork and drink spirits, are supposed to have most skill in devils.

A branch of these wiseacres practise inoculation for the small pox, and with the utmost success. The number stated to belong to this district is about 30, but many practitioners come from adjacent districts. It is not here the custom for the inoculator to repeat prayers. Some Brahmans and makers

of garlands perform this office. I am informed, that of those who are seized with the spontaneous disease, not above one in twenty dies. The operation is managed exactly in the same manner as in the districts already surveyed, and is attended with the most complete success, very few indeed dying. This success and the general adoption of the practice render the introduction of the vaccine of very little importance.* Mr. Hogg at Mungger, employed as subordinate vaccinator, cannot procure one person to bring a child without a bribe. It is true that bribe is not high, being one ana, or not quite twopence, or about a day's wages for a common labourer. One from this might be led to suppose, that parents here are little interested in their children when such a trifle can induce them to submit their offspring to a practice which they consider in any degree objectionable. I do not however see any other mark of such want of affection, on the contrary, the parents of this district seem fully as fond of their children as any where else, and to the amount of the bribe we must add the saving of the fee, that would be given to the inoculator.

In this district witchcraft (Jadu) is supposed to be exceedingly common. The people in the parts hitherto surveyed did not mention it so much as here; but whether from believing in it more or less I cannot say. My native assistants seem to think that they concealed their belief from an extraordinary fear; for not one of themselves seems to have the least doubt of the frequent practice or reality of the art. I suspect however, that in reality the people there are not so much afraid of the art as here; for they seemed much more communicative than the people of this district, and the only talk that I heard of it was in Kamrup, especially at Goyalpara, where the women were accused of using witchcraft for deluding their lovers. Much more desperate and unjustifiable views are here attributed to the witches, and occasion very great alarm to most parents. The witches (Dain) here also are supposed to be women, some young and some old. Their supposed practices would appear to be from pure malice. It is thought, whenever one of these witches sees a

* This is a mistaken idea; the continuance of inoculation propagates the disease, while vaccination tends to meliorate or to expel it.—Ed.

fine child, by means of imprecations addressed to some unknown gods, who are pleased with such worship, that she destroys its health, so that it pines away, and is deprived of reason, or dies.* Unless the witch knows the real name of the child, her imprecations do no harm. On this account children are usually called by some nickname, and their proper one is concealed; and, as most parents think their children fine, almost every one is alarmed, when in play his children go out of sight. The children however are generally fortified by hanging on them something that is considered as a charm against spells.† At Bhagulpoor it was stated to me, that about 25 children are supposed annually to perish in that town from the malevolence of these witches. Some poor women, it may be suspected, are not unwilling to be considered as witches; for, after they acquire this character, parents are alarmed whenever they approach; and, after having concealed their children, give the Dain some present to induce her to go away.

RELIGION AND SECTS.—Calculating in the same manner as I did in Dinajpoor, and including the hill tribes among the Hindus, I reckon the Muhammedan population at 23 per cent. of the whole, or at about 458,000 persons. In the Appendix will be seen the result of the calculation for each division, and also the various proportions of Muhammedans and Hindus in different parts of the district.

THE MUHAMMEDANS.—The number of Moslems seems to be diminishing, although converts are occasionally made, because they have less encouragement and means of subsistence than formerly. Although by far the greatest landholder is a Moslem, he seems far from encouraging the faith, and perhaps regrets the change of his family religion; for in some parts of his estate, of considerable extent, there is scarcely one of the faithful. The same mutual adoption of each other's religious practices, that exists between the Moslems and Hindus of Puraniya, prevails in Bhagulpoor. The Kazi of Mungger and Kharakpoor had never heard of the Satya Pir. I suspect, therefore, that this object of worship, common to the Hindus and Moslems, is peculiar to Bengal; but

* This is the German story of the evil eye.—ED.

† In Africa these charms or spells are used by all classes.—ED.

at Mungger the Hindus pray occasionally to Satya-Narayan, repeating verses in the dialect of Bengal. The Kazis seem to have no regular mode of conducting business. In some places they have regular deputies, called Nayebs or Mollas, who officiate for certain portions of their respective jurisdictions. In other cases they depute a person for each occasion, when personal attendance would be inconvenient. They do not in general, at least in Kharakpoor, consult the people in the appointment of Mollas, and there are no people of this description except the few who act as their deputies. I have not learned that any person in this district acts as a Mirmahalut. The lower excluded castes have Mehturs or Serdars, who settle the business of their associates in public assembly.

The office of the Pirzadahs, who admit people into the order of Murids, is somewhat like the confirmation of the church, or the Upades of Hindus, and seems more respected here than in the districts hitherto surveyed, although the number of those who profess themselves Murids is by no means greater. Considerable establishments have been granted to the families who enjoy the office, which is hereditary, and they seem to perform their office for many people who do not reside. I heard of no persons called Khondkars. I suspect that it is a term used in Bengal for those who are here called Pirzadahs. All religious mendicants, Hindu and Moslem, here as well as in Puraniya, are called Fakirs and Padres; but I shall confine the term Fakir to those of the faith in Muhammed. The Fakirs in this district are much on the same footing as in Puraniya, but are not so numerous, they may amount to between 550 and 600 families, mostly married; but the country is overwhelmed with vagrants of this name, most of whom want women, and are Benawas. The residents seem to be in general less amply provided than in Puraniya. There were four great founders of the order of Fakir, and every person of this profession belongs to the sect of some one of these four doctors. These four sects have again branched out into 14 orders, and every Fakir belongs also to some one of these; but the orders again have branched out almost *ad infinitum,* and the ignorant are in general only acquainted with the subordinate rule to which they pretend to belong. A great many of the Fakirs are here called Arzanshahi, from a holy man of Patna, who founded a rule. After

having resided some time at Patna or Azimabad he went to Wordi, and on that account many of his disciples are called Shahar-Wordi Fakirs. A disciple of this saint, named Mortuja Shah Anund, settled at Sutigram in the division of Pratapgunj, and founded a new rule of Fakirs, called Mortuja Shahi, after his name. These two are the most common sects here, but there are also some Julali and Madaris.

The Benawas are divided into two classes, Gudriposh and Benawas proper. The Gudriposh dress in rags sown together, and derive their origin from a certain Benawa named Gadanarayen, who added this extravagance to the rules of severity, which the common Benawas observe. They have no women, and beg for their daily subsistence, preserving nothing for to-morrow, and sleeping under trees, or accidental shelter. The Madaris should not keep women, dress in dark coloured clothes covered with ashes, and do not shave their heads nor beards. Muhammed Fayek says, that Budiuddin, who founded this order, did not live at Mudinah, but at Mukunpoor near Lakhnau. The Julalis ought to cover themselves with ashes, but do not seem to be excluded from women. They eat serpents and centipedes, and burn their bodies with balls made of charcoal, and torment themselves with iron spikes. The tomb of Julal of Bukhari, their founder, is at Kuriaungch in the Sikh country.

The people here seem more attentive to prayer and ablution than even in Puraniya. In Mungger the Kazi says, that from one-fifth to one-fourth of the whole perform these ceremonies at the five stated periods, and many more once or twice a day; but I believe, that in other parts of the district there is a much greater relaxation. Pilgrimage seems far from being fashionable; but I heard of two persons who have been at Mecca. I met several who pretended to be on the way, and on the strength of their intentions levied contributions from the charitable. I suspect, however, that they never meant to leave the banks of the Ganges. Many people, as I have said, are diligent readers of the Koran. The fasts are far from being regularly observed, and are neglected much, as in Puraniya; and many of the faithful drink spirituous liquors. The Mohurrum is observed by both Moslems and Hindus, much as in Puraniya; but only one of the latter, the Sultangunj Rani, makes a pageant; many send offerings.

The number of Shiyas is very inconsiderable; but either their zeal, or the intolerance of the Sunnis this year, during the celebration of the Mohurrum, was near occasioning an open rupture. On this occasion the Shiyas curse Omur, Abubukur and Osman, whom the Sunnis regard as saints, and are of course exceedingly enraged, although it would appear that the Shiyas perform their curses in places of worship peculiar to themselves, to which the Sunnis have no occasion to go. This year the Mofti of the court of circuit was a Sunni; and, it is said, procured an order from the magistrate to prevent the Shiyas from following their usual scurrilous practice. This gave great offence, and a tumult was likely to have ensued, had not a battalion of sepoys happened to march into the town. They were delayed a day, which kept every thing quiet. Concubines (Nekahs) are always united to their keepers by a religious ceremony, and their children are entitled to a share, even if there are children by a virgin spouse. The children by slave girls have no claim, if there are any legitimate children or near kindred. The doctrine of caste is fully more extended among the Moslems here than in Puraniya.

The Saiuds are very numerous, especially at Bhaghulpoor, and in Suryagarha. At Rajmahal the chief family of Zemindars, who before their conversion were Brahmans, contend that on that account they are entitled to be called Saiuds, and the influence which the family possesses, has on the spot produced an acquiescence; but in other parts none are called Saiuds who are not supposed to be descended of the prophet. It is thought, that in the whole district there may be 2300 families of this kind. The Moguls are less numerous, amounting only to about 900 or 1000 families, about one-half of whom are settled in the capital. The Pathans amount, it is supposed, to about 3400 families, of whom a large portion is also settled in the capital. These three tribes form a kind of gentry, none of whom chooses to apply his hand to labour; but they do not enjoy the high privileges with which they have been indulged in Puraniya. The bulk of the Moslems, who here also are called Sheykhs, chiefly employ themselves in agriculture. Of the tradesmen, who in this district are excluded from intermarriages with the Sheykhs, I heard the following mentioned. Momin-Jolahas or weavers, about 4300 families. Tape weavers and

string knitters (Patwars) 140 houses; and three weavers of cotton carpets are also excluded. Cotton cleaners (Dhuniyas), 1680 families.* Those who prepare and retail curds 100 houses, confined to the division of Fayezullahgunj. Taylors about 330 families. Washermen about 108 families, besides five families that scour shawls. Barbers about 45 families. To these belong also 20 families called Jurrah, who are a kind of surgeon-barbers, that have been already described. Butchers, including those who kill both beef and mutton, about 45 houses. Gelders (Abdal), 35 houses. Horse shoers, here called Nalbund, two families. Cutters, 28 families, are the only workers in the metals that are excluded.

One family which makes ornaments of lac; 25 families who make ornaments of glass, and about seven families of turners are excluded. Painters of two kinds, Patwar and Rungsaz, are generally excluded, there being 13 families of the former, and 20 of the latter; yet I found even a descendant of the prophet employed in this occupation, and not disgraced. Ninety-six families of paper-makers; and 20 families of those, who prepare tubes for smoking tobacco, are excluded. Eighty-seven families of dyers are excluded. A good many Beldars or pioneers have been converted, and still keep a separate caste. I heard of about 150 houses.

In this district no Muhammedans are fishermen; but there are about 280 families who retail fish, and are called Mahifurosh or Pajari, and are excluded. Twenty families are excluded, because they live by catching birds and managing hawks, and are called Mirshekars. Sixty-six families of Mukeri are excluded on account of being petty dealers in grain, and about 1450 families (Kungjra), because they retail greens. Five families, that retail the charcoal balls used in smoking tobacco (Tikiya-furosh), about 280 families, who retail tobacco prepared for being smoked, and 47 Bakhos and 80 Besatis, who retail spices, are also excluded. Eighty-six families of Bhathiyaras, who keep inns (Sarays) are excluded from communion, and also about 16 families of bakers.

The Moslem bards (Bhat) are excluded, and amount to 17 families. The Damphalis, who are excluded, amount to above 140 families. Here they not only play on the Damph

* Caste it will thus be seen extends to the followers of Muhammed.—Ed.

and beg, but hawk trinkets and spices. Eleven companies of Hijras or eunuchs, may be placed in the same class, as they are mendicants. Twenty houses of Dhotis are musicians, but do not beg.

There are 32 families of Bhangr, whom I took in Puraniya to have been jugglers; but I am told, that they are mendicant wits, who amuse the people by making wry faces and gestures, and singing ridiculous songs. Four houses of Badiyas play tricks with serpents, and no less than 63 families of Chambas tame monkies and bears for the amusement of the public, and do not torment themselves as in some other parts. The Helas are a low class of Moslems, the men of which here keep dogs, and the women are midwives to the rich. I heard of only four families. The accounts of this caste that I received in Puraniya were rather contradictory, and no one here speaks with certainty concerning people considered so vile. A great many of the female attendants, that European ladies can procure in India, are said to be of this class. The Muhammedan women of loose character are excluded from communion, and amount to about 112 houses. Besides these, 10 families of a higher class of dancers and singers, called Piranis, are to be found at Rajmahal, where they pretend to exhibit before persons of high rank only.

The Hindus.—I shall first, as formerly, give an account of the tribes and castes, and then conclude with some general observations. In enumerating the castes, I shall in general follow the order of rank which each holds in the western part of the district, formerly a part of the province of Behar; and this order differs much from that observed in Bengal; for the sake of connection, however, I shall treat of the analogous tribes of Bengal in the same order, although in the part of the district, which belonged to Bengal, the order of precedence is very different, as I have had occasion to mention in my account of Puraniya, to which I shall refer, whenever I have nothing new to offer on any subject.

To begin with the sacred order, Major Wilford says, (Asiatic Researches, vol. 9, page 74), that all Brahmans are of two kinds, Kanyakubja and Sakals, who came from Sakadwip. With respect to the former he also says (page 92), that the Brahmans acknowledge that they are not natives of India, but came from the north-west, and that Kanoj was

their first settlement. The Pandit of the survey has procured a book, called Rudrajamal, supposed to be composed by Siva, and published by Parasuram, who delivered it to the Munis or sages of old; but the man by whom it was made known to sinners is not known. In this book it is stated, that the Brahmans came from Sakadwip to Jambudwip, and after some generations went to Kanyakubja. After some generations again they dispered over different countries, as the Dakshin, Angga, Bangga, Kalingga, Kamrup, Odra, Bata, Magadha, Barandra, Chola, Swarnagrama, China, Karnata, Saka, and Barbara, according as they were favoured by different Rajas. This book mentions no other Brahmans. I am also informed by Gauri Datta, a Saryuriya Brahman of Kanoj, the most intelligent man whom I could procure to assist me in making this account, that in the Vishnu Puran it is mentioned, that all Brahmans were originally of Kanoj, and were afterwards divided into ten nations, according to the countries in which they settled. Major Wilford also has been informed, that the colony from Sakadwip first settled in the country called Kikat or South Behar, to which they communicated the name Magadha, from their ancestor Maga. Nor does this contradict the report of the Rudra Jamal; as the descendants of those, who remained behind in Kikat, might retain the original name of Magas or Sakadwipis, while the more successful colony of Kanyakubja is considered as the common source of the sacred order of this miserable world (Jambudwip). What country may be meant by Saka, I shall not take upon myself to say. From its being surrounded in Hindu legend by a sea of milk, I suspect that it is imaginary; but Major Wilford seems to think that he has been able to trace it in the west. In the country occupied by the Magas was first taught the doctrines of the Buddhs, which has been spread even to China, and in Ceylon, Ava, Siam, and Thibet has been accompanied by the original legends and written characters of the Gangetic plains; but I cannot agree with Major Wilford in supposing, that the inhabitants of these countries are descended from the Magas; in my opinion the countenance of the rude tribes of both countries, as well as of the more polished and intermixed nations, mark them clearly as distinct races of the human species. In the following account of the sacred order

I shall first mention the Brahmans of the ten nations derived from Kanyakubjas as the most important, and then return to the Magas and Sakals.

The extreme difficulty of coming to any fixed or rational conjecture concerning the transactions of a people who have no history, may be well exemplified in the opinions which I have given concerning the original seat of the nation of Brahmans called Gaur. In my account of Dinajpoor, I supposed it to have been in the west of India; but, when I reached Puraniya, a tradition current in that country induced me to change my opinion. Major Wilford however says, that the term Gaur in Hindu books is never applied to Bengal as a province, but to the city alone, as being the abode of the deity Gauri, whose temples I have mentioned in my account of that city; and he farther says, that the proper Gaur (Gauda as he writes it) is on the banks of the Narbada in Malava. In this district, at any rate, about 36 families only of Gaur Brahmans have settled; but 25 of them reside at Rajmahal, in what is now reckoned Gaur. They are of the sect of Vishnu, and their Guru resides in Brindaban, being of the Radhaballabhi school, which implies their worshipping Vishnu under the form of Krishna. Most of them here, as well as in Puraniya, are men of the world, chiefly merchants and shopkeepers; but five or six of them have images, and act as Gurus and Purohits for several tribes from the west of India.

The Maithilas are by far the most numerous of the ten nations of Brahmans, and amount to betweeen 5 and 6000 families. About a tenth part of these have taken up their abode in the part of this district, which belongs to the province of Bengal. The remainder reside in the western and southern parts of the district, and seem to have acquired as complete an ascendency in Magadha as they have in Mithila. In the two countries they follow very nearly the same customs which I have described in the account of Puraniya. The only difference which I perceive is, that the Brahmans, who officiate in temples, are here usually called Pandas, but this term is also bestowed on priests of the lower tribes. In the south it seems confined to the Sudras, who are dedicated to the worship of Siva.

Of the five sacred tribes introduced from Kanyakubja by

the Hindu kings of Bengal there may be 500 families, of whom nine-tenths at least belong to the Rarhi division, and not a tenth to Barandra; for Bollal Sen assigned all the portion of this district that belonged to the province of Bengal to the Rarhi Brahmans. Almost a half of this division however, has settled in the part of the district which belongs to the Mogul province of Behar. Besides these, there are from 2 to 300 families, who, by officiating for low tribes, have in the south-east part of the district degraded themselves to the rank of Varnas; and some who officiate for the Kaibartas, and are called Patits, or sinners. Only three houses of the Baidik Brahmans of Bengal are to be found in the whole district. Of the Brahmans, who retain the title of Kanyakubja, there are between 13 and 1,400 houses. Some of them call themselves merely Kanyakubjas; but others distinguish themselves by the subordinate and inferior denominations of Antarbediya, Saryuriya and Sanoriya. They go in carts drawn by oxen, as in Puraniya; but few only of them are of the sect of Saiva, and they are very much divided among the different sects that now prevail. A great part of them have lands either free or rented, by the cultivation of which they chiefly live. Some of them give religious instruction to their own tribe to Kshatris, Rajputs and Kayasthas; but the Maithilas perform most of the ceremonies, which here as well as in Puraniya is the most profitable part of the sacred office.

The Saraswat nation of Brahmans are from 20 to 30 families, who live chiefly by officiating in the ceremonies of the high ranks from the west of India. There is only one family of the Utkal nation. Besides the Maithila and Kanyakubja Brahmans already mentioned, from 4 to 500 families of the sacred order have been degraded in the western parts of the district by acting as priests for the low castes; and between 2 and 300 by performing the office of Kantha, or Mahapatra, or Agradani; but some of these last are of the five tribes of Bengal. In general the nation, to which these degraded Brahmans belong is not known, and they are called by their office, or by the name of the tribe for which they officiate. In this district none of the southern nations of Brahmans (*Pangcha Dravir*) have settled.

These are all the Brahmans that belong to the 10 nations, into which the sacred order is usually divided; but their is a

kind of Brahman called Mathura, from the name of a city in Brindaban. They pretend, that they sprung from the sweat of Krishna. They live in what is called a pure manner, and confine themselves to officiate as Gurus and Purohits for pure tribes, or to cultivate land, which they rent or enjoy free. One of them has some science; but concerning this tribe I have not yet learned anything sufficient to enable me to enter into a detail. Four families of Brahmans pretend that their ancestors were brought from Kraungchadwip by Dasarath, the father of Ram, in order to enable him to have a child. This Kraungchadwip is surrounded by a sea of melted butter, and is therefore far beyond the extent of my geographical knowledge; nor have I anything to relate concerning these Brahmans, except that they instruct many of those who worship Ram, and are considered skilful in astrology.

In my account of Puraniya, and in the foregoing pages, I have given some account of the Sakadwipi colony; they are alleged to be the original stock of almost the whole Brahmans; but it is only those who remained behind in Magadha, when their brethren removed to Kanyakubja, that retain the name Sakadwipi. Of these there are in this district from 2 to 300 families. They mostly practise medicine, by which they probably recommended themselves, when they arrived from their original country; and most of them understand the books on their science, which are to be found in the Sangskrita language. In search of employment many of them go abroad to other districts, and a few have studied Persian, and entered into the management of worldly affairs. They act as Gurus, or religious instructors for themselves; but hire Maithilas to perform their ceremonies. The people of the sect of Saur, who worship the sun, give much of their offerings to the Sakals, who are considered as peculiar favourites of the great luminary; but most of the Sakals are of the Sakti sect. They are divided into 18 families, and a man cannot marry a woman of the same family with himself. They say, that in Sakadwipi there were four classes of men: First, Magas, from whom the Brahmans are descended. Secondly, Magadhas, who were the military tribe of the country. Thirdly, Manasas, who were the merchants; and fourthly, Mandagas, who were the labourers; but none of the three lower tribes came with the Magas from their original country.

They still acknowledge the name of Magas. It is said, that an account of this tribe is to be found in the Samba-Puran, attributed to Vyas.

These Magas must by no means be confounded with the Magahis, Bhungihar or Zemindar Brahmans, yet these are undoubtedly the old subjects of the kings of Magadha, and are admitted by all to belong to the sacred order, although they never perform any of its peculiar duties. In my account of Puraniya I have given some account of this race, and when it was composed, I thought, that in this district I should have had an opportunity of clearing up many points, concerning which I found myself dubious. In this however, I have been in a great measure deceived; for, although there are in the district at least 10,000 families of this tribe, they are uncommonly shy, and the very mention of the terms Bhungihar or Magahi, especially of the latter, puts them in a rage. In Major Wilford's account of the Anugangam, or country watered by the Ganges, I perceive a reason that may be assigned for their unwillingness to be called by their national name. The Pauraniks, says this learned officer, (Asiatic Researches, vol. 9, p. 62), allege, that "Ripungjay drove away the Brahmans; and raised to the priesthood men of the lowest tribes, Kaibartas boatmen and fishermen, Patus, Pulindas, and Madrakas; but these Brahmans were no better than Mlechchhas or impure and base-born men. These boatmen and fishermen, being used to live upon fish, would never give up their favourite food when raised to the priesthood, and their descendants the Bengal Brahmans live upon fish even to this day. The same circumstance is mentioned in the Vishnu Puran." The comment on the Brahmans of Bengal has probably been written by some person who was not aware, that of all the five northern nations of Brahmans, Gaur, Utkal, Kanyakubja, Maithila and Saraswat, it is only the first that are excluded from eating fish, although many of all the nations reject this food from an idea of purity. The books to which the Major alludes, have therefore in all probability been written in the south of India. The Brahmans of Bengal cede to none, I believe, in either purity or learning; and this passage in the Purans seems in reality to be aimed at the introduction of the sect of Buddh, to which the later Hindu princes on the banks of the Ganges belonged. As the

doctrines of the Purans prevailed, and when this story had become current, the Brahmans of Magadha became ashamed of their country. The reason why they seem to be offended at the Hindu term Bhungiya, and to prefer the Persian synonym Zemindar, is, that in this district there is an exceedingly low tribe called Bhungiya, with whom they are afraid of being confounded. This Ripungjay Raja, who lived about the seventh or eighth century of the Christian era, is also said to have "exterminated the remnants of the Kshatri tribe, and to have filled their places with people of the lowest classes." Part of these I take to be the ancestors of the Bhungiyas, with whom this tribe of Brahmans is afraid of being confounded; but the Kshatriyas of Magadha had previously been destroyed, or driven out of the dominions of Mahananda king of India, who flourished in the fifth century before the birth of Christ, (Asiatic Researches, vol. 9, p. 37), and this prince placed Sudras in the room of these nobles or soldiers. I am inclined to suspect, that the Zemindar Brahmans are the descendants of those Sudras, admitted by this prince into the military order; for their manners are entirely similar to those of the other tribes of military cultivators; and, as I have said in my account of Puraniya, they seem to be the descendants of the Brachmani of Pliny. Brahman, it must be observed in the languages of India, is not exclusively applied to the order of priesthood; but as I have said in my account of the religion of the Burmas, is applied to the new inhabitants of any land. Accordingly we find in Mr. Joinville's account of Ceylon, many colonies of Brahmans entering that island; but these Brahmans, instead of being priests, would appear to be industrious weavers; and it must be observed, that the title of the Brahman priesthood in their original country is said to have been Maga; so that it was probably on their arrival in India as a new colony, that they received the name Brahman.

Great persons among these Brahmans are fond of being called Raja, those who have estates assume the title of Zemindar, and those who are poor distinguish themselves by the name of the tribe to which they belong. These tribes are numerous, and somewhat resemble the old clans of Scotland, as all the members are supposed to have a common descent in the male line; but they seem to have little attach-

ment or respect for their chiefs. The nation is said to extend on both sides of the Ganges from Benares to the frontier of Bengal. In this space I have heard of 19 tribes.

Before the time of Siwai Singha they acknowledge, that they all ploughed and worked oxen with their own hands; but those in Mithila having since been threatened with being reduced to the rank of impurity, should they persist in this iniquity, have given it up. The poor, however, even there do all other kind of work about their farms, and in Magadha they continue to hold the plough. Besides these common Brahmans of Magadha, are between one and two hundred familes, who call themselves Magadha Desi Srotriya Brahmans, who live very pure, and act as Gurus and Purohits for pure castes; but, so far as I could learn, have no learning; nor have I been able to hear any thing of their history. They have no connection with the Srotriyas of Bengal, but are considered as much higher than the military and agricultural tribes of Magahi Brahmans.

In the eastern corner of the district are about 40 families of Daivaggnas, who are hereditary astronomers, and are considered in rank as next to the Brahmans. In the other parts of the district the sacred order has reserved to itself this branch of science. Next in rank to the astrologers are between five and six hundred bards of the Hindu religion, who are called Brahma Bhat. Most of them have small endowments, and they all have some land, that they rent from Zemindars, or hold from government. They are all employed at funerals and marriages; or, if they are very poor, are open beggars on all public occasions. In common, men of reputation get from one to five rupees, but great persons often give 20 rupees. Bhats of inferior abilities get from one to 15 anas. If not paid according to their expectation, they are apt to be very abusive; but of late people of rank have begun to resent the liberties, which the bards were wont to take. Notwithstanding the military tribe has been twice at least expelled from this country, there are about 80 families scattered through the district, who call themselves Kshatris; but there is great reason to think, that these are in reality Khatris from the west of India.

The Rajputs in this district are exactly on the same footing as in Puraniya; that is, in the parts, which belonged to the

province of Bengal, they are considered as inferior to the scribes, physicians, and merchants; but in Behar, they are considered as next in rank to the bards, and are allowed to be Kshatriyas or members of the pure military tribe. In this district are between five and six thousand families. Some of them hold the plough with their own hand; but these are disgraced, and the others will not intermarry with their families. There is besides a tribe of Rajputs called Baksariya from Baksar (Buxar R.), of whom about 500 families have settled in this district. Wherever any considerable number of these Baksariyas live in one place, it is called Katgar. They are considered as peculiarly warlike, and bold, and plough with their own hand; but, owing to their violence, their purity is not disputed. The customs of the Rajputs here are the same as in Puraniya.

The Kshetauris pretend to be of the military rank, and having been long in possession of a great part of the district, their claim is so far in general admitted, that in many parts they are placed next in rank to the Rajputs. I have mentioned the remains, which their chiefs have left. In the western end of the district the Kshetauris have been in a great measure exterminated; but there still remain, in the middle parts chiefly, above 3000 families, and there are still in the division of Bangka four persons, who assume the dignity of Raja, and take their titles from Manihari, Hangrwe, Barkop and Parsanda. An account of their genealogy and condition will be afterwards given. The Kshetauris pretend, that, when Parasuram destroyed the military tribe of India, two of them fled to Viswakarma the god of artists for protection. Parasuram, coming up, was desirous of killing them, but Viswakarma said, these are not Kshatris (fencibles), but Kshetauris, (farmers), on which Parasuram demanded proof by their handling the plough, which in order to save their lives these degenerate persons consented to do. Their descendants have ever since been called Kshetauris, and are considered as somewhat degraded. The tribe, after this, resided for many ages in the vicinity of Delhi; but, on the Muhammedan conquest of that city, they retired to Chhota Nagpoor and Kharakpoor, both of which, for some time, almost entirely belonged to them. No such tribe I am told remains near Delhi; but the Kshetauri, Koeri and Dhanggar

are still the principal inhabitants of Chhota Nagpoor, where, I am informed, the two latter, and I suspect, the former do not speak the Hindi language, and the Dhanggar are still impure, and perhaps infidels (Mlechchhas). Another tradition concerning the Kshetauris is, that they were originally of the low tribe of fishermen called Chandal, and were raised to importance by one of them, who was a favourite of Ram. I have little doubt, that in fact, whether infidel mountaineers or vile fishermen, they were one of the tribes raised to military rank by Raja Ripungjay, and that on their becoming followers of the Brahmans, these priests invented a Pauranik legend. They have now entirely adopted the manners of the Rajputs, and as many, as can afford, will not labour their fields with their own hands; but those, who hold the plough, are not disgraced. Their Gurus are partly Maithila, and Rarhi Brahmans, partly Dasnami Sannyasis. The Brahmans of both kinds perform their ceremonies. The affairs of caste are settled in assemblies of respectable people, nor have they any hereditary chiefs.

Of the medical tribe of Bengal (Baidyas) there are only between twenty and thirty families, all settled in the parts of the district that belonged to the province of Bengal; where they are allowed to be higher than the scribes. In Behar the pen-men (Kayeth or Kayastha) are placed next to the Kshetauris, and by the Brahmans are considered as bastards; to whom the rank of Sudras has been given; and in general they do not presume to be angry at this decision, which in Bengal would be highly offensive. Some of them however pretend, that they did not proceed from the feet of Brahma, like Sudras; but that three of them were made from the dust, with which, during the fatigues of creation, the whole person (Kaya) of the God was covered. One of these men of dust, named Cihitra Sen, was writer to Ram or Bacchus, and from him are descended all the scribes on earth. One of the remaining two was given to the judge of the infernal regions, and the other to the chief of serpents.

[Dr. Buchanan gives a long account of the various castes or trades,—a description of which will be found in Puraniya, Behar, &c.—Ed.]

The mountain tribes are, I believe, the descendants of the original inhabitants of the country, very little, if at all, mixed

with foreign colonies. Their features and complexion resemble those of all the rude tribes, that I have seen on the hills from the Ganges to Malabar, that is on the Vindhya mountains. Their noses are seldom arched, and are rather thick at the points, owing to their nostrils being generally circular; but they are not so diminutive as the noses of the Tartar nations, nor flattened like those of the African Negro. Their faces are oval, and not shaped like a lozenge, as those of the Chinese are. Their lips are full, but not at all like those of the Negro; on the contrary, their mouths in general are very well formed. Their eyes, instead of being hid in fat, and placed obliquely, like those of the Chinese, are exactly like those of Europeans. In fact, considering that their women are very hard wrought, they are far from having harsh features.

The most remarkable of these mountaineers is the tribe, which occupies the northern part of the Rajmahal hills. To the map and topography I refer for an account of the territory, which they possess, and for an account of their manners I refer to a paper by Lieutenant Thomas Shaw contained in the fourth volume of the Asiatic Researches, to which I have very little occasion to make any additions. The orthography, which I have adopted, differs from that employed by the above mentioned intelligent officer, not from any idea, that his is incorrect; but for the sake of uniformity. In the first visit, that I made to their villages, on the hill Gadaitunggi, east from Udhwanala, I went from the bank of the Ganges in a palanquin, which I left at the foot of the hill, and in order to give no alarm ascended with only two servants, and a guide who was a mountaineer in the service of the post office. Not one of us had even a stick in his hand. As we ascended, we were joined by a young man, son of the chief of the village, who, as I passed, came from a farm on the plains, which his father rents. The young man was intelligent, and not at all rude; but showed no disposition to give us a cordial reception. When we came to the village, all the men remained in their houses, and most of them shut their doors. The women and children came out to look at me, but declined conversation, although the young man said, that all the women could speak the low country dialect. I went towards two or three groups; but, as I approached, they all retired, except one young woman, who had a good deal of reason to be satisfied

with her appearance. As I approached, she stood with a becoming, but modest assurance; but she would not speak. I now determined to put the young chief's hospitality to a full trial, and sat down on a stone by his father's door, complaining of the heat, and of thirst; but he neither offered to take me into the house, nor to give me water.

Another attempt on the hill Chaundi, west from Rajmahal, convinced me, that these people do not possess the virtue of hospitality. I soon after indeed found out the means of making them assume its appearance. I had passed along a great part of their frontier, without having been able to procure any intercourse, sufficient to give me a knowledge of their manners; and I therefore determined to give a feast, which I was told would answer the purpose. At Ganggaprasad I invited those of the neighbouring hills, and gave them a dinner and drink. At Paingti I gave another entertainment. Afterwards, so long as I continued in their neighbourhood, I was completely worried with their attentions. Flocks poured in with little presents of honey, and eager to give me information; and, when I visited any of their villages, I found every door open. Our intercourse, however, always terminated in a solicitation for drink, a most extravagant fondness for which seems to be the greatest foible of the tribe. They are, however good natured in their cups; and one of them, who was brandishing a hatchet, as he was dancing amidst a staggering crowd, readily gave it up to me, and seemed sensible of the propriety of my taking it. A custom, which they observe in their dances, clearly marks their insatiable desire for liquor. The chief person goes round the men and women of the party, as they dance; and in their turns pours from a pitcher into the mouth of each, what he thinks a reasonable quantity. When he has gone the round, another person takes the pitcher, and helps the chief. No one helps himself to the pitcher, sensible that so long as a drop remained, he could not remove it from his lips.

They are fully as well dressed and cleanly as the neighbouring peasantry, and their women have a greater quantity of ornaments, and these more valuable. Their houses are more roomy and airy, and fully more clean. The principal ornament of their huts consists of the skulls of the tigers, deer, hogs and porcupines, which the owner has slain, and

on the number of these trophies he prides himself with all the exaltation of a keen sportsman. Their chief art is the preparation of what they call Pachoi, that is fermented grain, from which they prepare their liquor, and which differs considerably from the operation of malting. The grain, either maize or janera (*Holcus Sorghum*) is boiled, and spread out on a mat to cool. It is then mixed with the ferment of vegetables called Bakar, which I have described in my account of Ronggopoor, and kept in a large earthen pot for eight or nine days.* Warm water may at any time be added to this, and in a few hours it ferments, and is ready for being drank. This liquor they call Pachoitadi. Some of them can distil it, and prepare Patkatadi. In the southern parts of their hills this tribe possess many oxen and cows; but in the northern parts they have only domestic swine and goats, as mentioned by Mr. Shaw. A few of them can read and write the Nagri character.

These people call themselves Maler; but they admit that this name is also applicable to the southern tribe of mountaineers, whose manners and language are very different, and with whom they cannot eat nor intermarry, nor could I hear of any tradition concerning the two tribes having ever had similar customs; but probably their customs at no very remote time were the same, their traditions going back to no distant periods. They have, for instance, no tradition concerning the introduction of maize, which is now their principal food; and its introduction must have been the greatest improvement on their condition that has ever taken place, and has occasioned the addition of a new god to their worship. All other tribes they call Galer; but among these are comprehended several tribes that shall be afterwards mentioned, with whom they sometimes intermarry, many of whom retain their language, and all eat in common, and join in the repast on beef. The Suzawul or native officer who superintends their conduct estimates the number of this tribe at 80,000 houses.

On a most careful inquiry I learned that the territory of this tribe is reckoned to contain 589 villages, and that though some few of these contain from 30 to 50 houses, the average cannot be taken at above 12 houses and 60 people for each, giving in all 7068 houses, and 35,340 people. In the whole

* See Vol. III. book II.

of their territory I have allowed 38,000 people, the difference being on account of the Ghatwals and their dependents residing among the hills. This tribe openly boasts in its impurities, and glories in eating beef and drinking beer, as if it were composed of Englishmen; but all the other tribes have become more or less ashamed of committing such enormities, and endeavour to shun or conceal part of their impurity. This produces a great difficulty in tracing their pedigree; for the various degrees of command which in different parts the people of the same tribe have obtained over their unruly appetites has given rise to innumerable divisions, and at very little distances totally different customs prevail.

The Nat are usually called Pahariya (hill) Nat, in order to distinguish them from those who amuse the people by performing tricks. The northern tribe consider their southern neighbours as brethren, and call them Maler, the name which they give themselves; but the southern tribe, shocked at the impurity of the others, deny this consanguinity, and most usually call the northern tribe Chet, while they assume to themselves the denomination of Mal or Mar, which however is probably a word of the same derivation with Maler. The Mal however divide themselves into three tribes, Kumarpali, Dangrpali, and Marpali; and they often call the northern mountaineers Sumarpali, thus, as it were, acknowledging a common origin, which I have little doubt is the fact. The manners and language of the three southern Pali are the same, and they speak a very impure dialect of the Bengalese. The three Pali were originally local distinctions, but now all live intermixed, have exactly the same customs and language, and intermarry; but there are five real hereditary distinctions, which descend in the male line. The highest rank consists of the Rajas or chiefs and their descendants, all of whom are called Singhas or Lions. Next to these are certain families that were at one time rich, and are called Grihi. They assisted their poorer brethren with loans, and seem to have been a kind of bankers, like the Vaisyas of the Hindus. They never seem to have held any office in the state. The third in rank were the Majhis or chiefs of villages, and none but persons of this rank were ever permitted to hold this office. The persons of the Aheri or fourth class were by birth hunters; and at first, in all probability, were the lower

and labouring class, like the Sudras of the Hindus; for what is now considered as the lowest and fifth class is composed of the Naiyas, who are allowed to have originally been the priests, but have been totally discarded from that office. It must be observed, however, that by the neighbouring Hindus the term Naiya is usually given to the whole tribe. From among the persons of a certain family he appointed a Majhi for each village; but after his appointment the Majhi could not be dismissed without the consent of an assembly of the whole tribe, from which no one was excluded. The Raja appointed also a Foujdar to command in predatory excursions, and could dismiss him at pleasure. He also appointed a Dewan. Each person gave annually to his Majhi some share of his crop, a goat, a pot of honey, and a bundle of rope; and the Majhis again gave to the Raja a share of what they thus procured. This custom continues; but the Foujdar is no longer necessary, and the Majhis are considered as hereditary by right of primogeniture. The land seems to be the property of the cultivators. On the hills and swelling land the field is cultivated two years, and then lies fallow for five or six; but a man may prevent any other from cultivating his fallow land. Every family has some land, but some have not enough, and these at spare time work for wages. There are no slaves.

A field thus cultivated after a fallow is called a Vari, and in the hills is not ploughed; but in the low country it is often ploughed, and there some of the Mal possess rice lands, that every year are regularly cultivated. Their huts are usually contiguous to the Vari, and near them they have small gardens, in which they rear plantains, capsicum, and green vegetables. On the hills the Vari is not ploughed nor hoed. The men cut the trees and burn them, and the women sow the seed. On the first year they scatter over the surface seed of the kinds of millet called Kheri and Kangni; and, with a stick pointed with iron, form small holes, in which they drop seeds of the maize, of janera, and of a pulse called Bora or Kalai. In the second year they plant only the maize and janera. In the Varis on the low lands, which are ploughed, they raise the same articles as on the hills with the addition of rape-seed and sesamum. They collect wild yams, and besides cows and oxen, for milk and labour, they rear swine

goats, fowls and pigeons for eating. They ferment both maize and janera, and usually drink the liquor without distillation; but some are acquainted with this art. They make no cloth, and cannot work in iron. They have most of the instruments of music commonly used in the low country, and have adopted inoculation for the small pox. Although their progress in agriculture is greater than that of their northern neighbours, their huts are much more wretched and dirty, their clothing is more scanty, and their women are less cleanly and worse provided with ornaments. This, I presume, is owing to a consciousness of impurity and sense of degradation which has taken away the pride that induces men to labour for distinction. Their deities have neither images nor temples. The bodies of the dead are burned on the same day that they die; and, if the person has been of rank, a Brahman performs ceremonies. The kindred mourn five days, and then give a feast.

Among the rich, who have Hindu priests, premature marriages are in use; but the poor often wait until the girl is 20 years old; her inclination however is never consulted. Her parents always receive some money from the bridegroom, but not enough to defray their expense. A man may marry several wives. A widow may live as a concubine (Samodh) without any religious ceremony, but the connection is permanent. Adultresses are turned away, but may become concubines. If an unmarried woman prove with child, her paramour must marry her. The eldest son at present succeeds to all dignities and land, but he gives his brothers a share to cultivate, and a father's moveables are divided equally among his sons. The women are left to be provided for by the sons until they are married, or become concubines.

My informants have no tradition concerning their tribe having emigrated from any other country, nor have they ever heard of any emigration from their hills; but in the hills of Mallepoor, south from Mungger, there are about 100 families of a similar rude tribe called Naiyas, the name usually given to the Mal by the neighbouring Hindus. These live by cutting timber, and have scarcely any agriculture. Neither Naiyas have indeed any knowledge of the other.

General manners of the Hindus.—In this district I shall chiefly confine myself to those which belong to Ma-

gadha, and they differ very little from those of Mithila, which have been described in my account of Puraniya. I shall therefore confine myself to the mention of their differences. The pure castes are allowed to eat rice cleaned by boiling, an indulgence, however, from which a great many abstain, especially the Baniyas. Brahmans do not eat meat, except such as has been sacrificed, and that of weathered goats. The other pure tribes do not eat tortoises, and as usual the sect of Vishnu, even of the lowest rank, abstains entirely from animal food and liquor. On this account, people of this sect seldom take Upades until advanced in years. Many of the hill tribe kill and eat the ox, and some of them eat rats, serpents, and jackals, and monkies. Some Brahmans smoke tobacco. Except Brahmans, Rajputs, a few of the Baniyas, and the sect of Vishnu, all avowedly drink spirituous liquors. Somewhat more than in Mithila celebrate their parents' memory in the Tithi; but they only observe the Amabasya of the month Aswin. The people here have no objection to live in a house where a person has died; but yet they very seldom allow any one to die in the house, least he should become a devil or ghost. If near the holy river, the moribund are placed with their feet in the water, and the Purohit reads prayers until they die.

The low castes marry earliest; but the high castes almost always procure matches for their daughters before they reach the age of maturity. The two most heavy expences which a Brahman incurs, are the marriages of his children, and the assuming the thread; but, if they have not money enough of their own, they can usually raise it by a subscription of the neighbours. The season for marriage lasts Magh and Phalgun, stops in Chait, and recommencing in Vaisakh, continues all Jyaishtha and Ascharh. The expence and noise are intolerable, and for a great part of the time many people continue idle, going from one feast to another. There is little or no trouble in matching their girls with persons of proper rank; the Brahmans here being less attentive than in Puraniya to distinctions of that kind. The men very seldom take a second wife, unless their first has lived long without having children.

Among the castes who keep concubines, the younger brother cannot take the elder's widow except she is willing,

and she may go with whomsoever she pleases. The concubines are widows, and are not connected with their keeper by any religious ceremony; but the connection is indissoluble, except on account of infidelity. They are called Samodhs, Sagai, and Chuman, and their children may intermarry with those of virgin spouses. An unmarried woman who has had a child cannot be married; but, if her lover has been of the same caste, she may live with him as a Samodh; he must however in that case pay a sum for purification. If her paramour has been low, she is turned out of her caste, and her kindred must pay the expense of purification before they will be received in company. The children of private connections are illegitimate.

Widows in some parts burn themselves pretty frequently,* especially the Bhojpuri tribes settled in Mungger. In that town about one in a year may burn herself, and in the whole district besides there may every year be about two sacrifices of this nature. In my account of the castes I have mentioned the principal sects to which each is addicted. The Pandit of Mungger thinks that in Magadha the three sects of Vishnu, Siva, and Sakti are nearly equal in number. The doctor chiefly followed by the sect of Sakti is Krishnananda. None profess themselves of the Virbhav, at least in Magadha; nor is the Syamarahasya in request. In the Bengalese part almost all the sect of Vishnu worship Krishna. In Magadha and Mithila they chiefly worship Ram. There are a very few of the sect of Saur and Ganapatya.

All sects and tribes make offerings to the Grama Devatas, but the sect of Vishnu do not kill the animal; they turn it loose. In the account of the topography of the divisions I have mentioned the most usual of these deities, many of which are males, and seem to have in general been rather men celebrated for their piety than for their heroic actions. Many again, both male and female, seem to have been the deities of rude tribes who formerly inhabited the country, and whose descendants have been converted. The females have usually annexed to their name the title Mata, just as in

* This horrid murder is now totally abolished; I established in India a journal in four languages, which led to its safe and immediate cessation in 1829.—[ED.]

the south of India they are called Uma, both words signifying mother. Many again of these gods are called Bhut Devatas or devils, by the Brahmans, who however do not fail to worship them. They have no images, but sometimes a rude stone, or where that cannot be procured a lump of mud, generally on a hill, or under a tree. Many have Brahman Pujaris, and many have persons of low or even vile tribes approaching on being Mlechchhas: some of both kinds have endowments. In the part of the district, which formerly belonged to Behar, the priests of most of the village deities are called Kaphri, a word peculiar, I believe, to that part of the country. The Kaphris are supposed to be capable of inspiration by gods and devils. Those who are in danger from disease, not only apply to procure favour from the god, but to know the result. When the Kaphri makes the offering, he becomes violently agitated, and, after the usual mummery, gives a response. When people are bitten by serpents, they are in many parts carried to a temple of Bishahari, and the Kaphri pretends, by looking at a pot of water, to foretell the event. If the water is agitated when the offering is made, it is supposed that the deity has come to assist in the recovery, which will of course take place. It is not only the Kaphris that are supposed to be capable of inspiration; but the devils or gods are supposed to inspire another class of men called Chatiyas, who on such occasions are violently agitated and give responses. Some of these Chatiyas are Brahmans, others are low fellows. The ignorant worship them, offering sacrifices, milk, sweetmeats, and the like. Each Kaphri or Chatiya, who pretends to be inspired, has an attendant named Phuldhariya, who conducts the ceremonies, and holds his master while he pretends to be deprived of reason by the deity or devil. He also explains what his master says, which is generally unintelligible. In fact he is generally the greater rogue of the two.

The following are the chief Grama Devatas. Kali, in some places called Burhi Kali, is well known as the great object of worship among the Brahmans of Bengal. Siva is in some places here considered as a Grama Devata, is sometimes called Kanggali or the beggar, in others Burhanath, in others Gaurisangkar, and in others Bangkanath. One of the most common is Bishahari, the terrible reptiles under

her authority being uncommonly destructive. Siddheswari, Chandi, and Mahamaya, are not very common, and I saw none of Sitala. Makeswari is a female deity.

Dubebhayharan, in the very extensive territory of Kharakpoor, is the most common village deity. He is supposed to have been a Brahman of Kanoj, on whose lands Abhiram, a Kshetauri Raja, built forcibly a house. The Brahman, in order to be revenged, ript up his own belly, and, having become a devil of the kind called Brahmadasya, has ever since been a terror to the whole country. In particular he has destroyed the whole Kshetauris; and those who call themselves such, are alleged by the Kaphris of this god to be mere pretenders.

Pachuya, a male devil, who destroys children. Ram Keyari, a male deity. Mahadano or Dano and Pahardano, a male god of the rude tribes. Bisurawat, who was a holy man of the Goyala tribe. Chamufoujdar who was a holy man of the Tiwar tribe. Kama and her husband Kira were two holy persons of the low tribe called Musahar. Chaldev, a god of the Maler. Nilamata, the god of several rude tribes. Hari Ojha, a male saint. Ratnamohan, who was a Zemindar Brahman, that was killed by a tiger, and became a devil, of whom every one is exceedingly afraid. He is chiefly worshipped at marriages. Kokilchandra is a devil exactly of the same kind, but he is addressed chiefly at harvest. Several of his priests are Brahmans. Jaguhajra, a watchman or Dosad. Garbhakumar. This devil, according to some, was a potter, according to others, a milkman; but it is generally believed, that like the two Brahmans, he was killed by a tiger, and his ghost has ever since been a terror to the neighbourhood, and it is deemed prudent to worship him. His priests are milkmen. Bhaiya Singhamata, a female. Sivaram Thakur, a sainted Brahman of Kanoj. Ram Thkur another. Kalkali, a female deity. Ajan Singha, a sainted Brahman. Sales, of whom I have made mention in my account of Puraniya. Kamalnaiya, a sainted or bedeviled Brahman. Bhimsen, mentioned in my account of Puraniya. Vindhyavasini, a female deity. Rakshasi, a deity of the Maler. Sikharavasini, a female deity. Bajun, a female deity. Takshak. Sanggu Mandal. Satbhaiya. Loknath. Sabal Pahalwan. Babu Ray, a male devil. Brahma Devata,

a deified saint of the sacred order. In many villages the deity is anonymous, and is merely called Grama Devata. In Magadha the Charakpuja is not in use, except among some Bengalese settlers.

The chief worship among the Hindus of this district is bathing in the river, and pilgrimages. Out of the district, Baidyanath is the chief place of resort; perhaps one quarter of the Behar population, including women and children, and the western tribes settled in the part of Gaur belonging to this district, go there annually. Few of the Bengalese give themselves the trouble. Next to Baidyanath, Harihar Chhatra at the junction of the Gandaki and Ganges, opposite to Patna, is the place resorted to by most people of this district. Perhaps 5 or 6,000 go there on the Purnima of Kartik. It is a great fair, and the trade and amusements of the place seem to be a principal object.

About equal in reputation is the Mela near Kangrhagola, at the junction of the Kosi and Ganges, as mentioned in my account of Puraniya. To Jagannath perhaps 1,000 people may go annually, and as many to Janakpoor; 500 may go to Gaya, and 300 of these may go on to Kasi. Perhaps 100 go to Kasi alone. Perhaps as many go to Prayag at the junction of the Yamuna with the Ganges. Here the worship by hoisting flags is not fashionable. In the Bengalese part, during the month Kartik, many people hoist a lamp, and bunch of sweet basil (*tulasi*), at the end of a bamboo.

In Behar the Holi is much more celebrated than the Durgapuja, or Dasahara. In the Bengalese part the reverse is the case. At the Holi great multitudes of men assemble, wherever there are images of Krishna and Radha, and sing indecent songs, and throw red starch at each other. In Sravan (from the middle of July to the middle of August), at a festival called Jhulan, the women and children assemble at night, and amuse themselves by a swing, and celebrate the loves of Radha and Krishna in songs.

The Goyalas in October or November, celebrate a holy day called Govardhanpuja or Annakut Yatra. They pray to a heap of boiled rice, which is supposed to represent the hill Govardhan, where Radha and Krishna passed some of their time; and make an offering of food, red lead, turmeric, and flowers, to each animal of the cow kind that they

possess. They also repeat some prayers to the sacred herd. The Sudras are not allowed to read the sacred books, and the Kshatris do not give themselves the trouble. In Kartik, Magh and Vaisakh, some learned men read small portions of the Purans to the rich, and explain the meaning in Hindi. The portions selected explain the modes of worship, that will be agreeable to such and such gods, and procure such or such blessings. The people of Magadha have little or no objection to take an oath by the river water. The Purohits have here much more profit than the Gurus or religious guides, although every Hindu here, as elsewhere, acknowledges that his Guru or spiritual guide is perfectly equal in wisdom and power to God.

In a few places are some Brahmans, who perform the ceremonies of those only who abstain from Samodh; but in others the same person officiates for all the pure tribes. The whole are called Paurohityas, and the term Dasakarma is not in use. There are here no Chausakhis, each impure tribe has a sect of degraded Brahmans peculiar to itself. No Guru of the Sackti sect has any considerable influence. They are mostly Brahmans, but the Dasnami Sannyasis have begun to interfere.

The Saivas do not here conceal their sect. The Brahmans of this opinion have Gurus among their own order. The Rajputs and Sudhas are under the guidance of the Sannyasis as in Puraniya. In this district there are scarcely any of this order of men who are merchants, perhaps five or six houses; and many of those, who act as spiritual guides, are (Udasin) unmarried, and are supposed to observe the rules of their order. There are of them about 30 Akharas, the most distinguished of which is on the rock near Sultangunj, that is surrounded by the Ganges. Each Akhara contains several Sannyasis under the authority of a Mahanta or Mathdhari. They seemed to me to be poor ignorant creatures, very pious, and zealous in the mortification of the flesh. Some of them can read, but only one of them understands any Sangskrita. Of those who have married, and have become San-Yogis are 150 families, who also act as instructors. Some of them have endowments; others rent land, and employ servants to cultivate; none of them have any sort of learning. By far the greater part of the people of the sects of Siva and Sakti are

instructed by strangers, who come wandering through the country, and those who have their houses or Akharas here, wander in the same manner; for it would appear, that the more they are known the less they are respected, or that like the prophets of old, they are little valued at home.

The Kanphatta-Yogis have a few disciples in this district; but none of them reside. The Janggams are married, and observe the rules of purity commonly kept by Sudras of the sect of Siva; that is, they eat the meat of sacrifices and fish, drink spirituous liquors, and keep concubines. All their male children follow their profession, which is that of mendicants. The women do not beg. The men when begging, sing concerning the nuptials of Siva and Parwati, ring bells, and make various noises to attract notice. They wear many beads, and have on their head an ornament of brass, which they call a temple of Priapus, and it contains an image of the great god. They consider themselves as representatives of the sun; but worship Siva alone. They are followers of Gorakshanath, who was born of a cow, impregnated by their god. Gorakshanath* is however considered as a god, and his disciples the Yogis, are the Gurus of the Janggams. Their ceremonies are performed by Brahmans of Mithila, who are not degraded. Their dead are buried. They would admit proselytes from the highest ranks; but afterwards would neither eat in their company, nor give them their children in marriage. They take no share in the instruction of the disciples of the Yogis. They are quite ignorant, and imagine that Gorakshanath was begotten, while Vishnu was churning the ocean, a fable which seems to be in favour among the Hindus, in proportion to its monstrous extravagance. Of the Aghorpanthi, it is said, that there are 19 persons or heads of families.

At Mungger I procured an interview with Betolnath, and one of his pupils. The chief was said to be at the head of all the sect in this district, and was called Guru; but was so drunk as to articulate with difficulty, and he could never read. The pupil (Chela), who was tolerably sober, alledged that the Guru would succeed to the dignity of Kinanath of Benares, when that chief of the whole order died. The Gurus should abstain from all connection with women, and

* See Vol. I. p. 65, figure 6, plate VI.

the Chelas do not marry; but they have families by women of the sect, who by exchanging necklaces form permanent connections equally binding with marriage. Disciples may be admitted from among Brahmans, Kshatris, Khatris and Rajputs, but from no other caste. Betal was born a Rajput. The Gurus have no fixed abode, but go from one Chelas house to another; and the Chelas live entirely by begging, or rather by terrifying weak people; for their customs produce universal abhorrence. They are permitted by their rules to eat whatever they please, even human carcases, which they occasionally do, as they say, merely to excite the astonishment of those from whom they wish to procure charity. They do not care who cooks their victuals. They say, that there is only one god Nirakar (the immaterial) Brahma, at least, that he is the only proper object of their worship; for it does not seem ever to have entered into the imagination of my imformants to dispute the existence of other gods. They say also, that they follow the doctrine of Gorakshanath, and that some few of their Gurus can read.

In the eastern parts of the district the Goswamis of Bengal have by far the greatest influence, especially the family of Nityananda, who may have ten-sixteenths of the people of this sect. One of the family called Ballabikanta, has taken up his abode at Syamgunj in Aurunggabad. He is not considered as a man of learning. Another branch of the same family is represented by Tilakananda, Chhabilananda and Premananda, who live at Nasipoor and Panisala, near Moorshedabad and at Junggipoor. The eastern part of the district is considered as their property (Velayet), and every worshipper of Krishna gives them somewhat, although he may have another Guru. They have appointed a Foujdar, who resides at Manggalpoor. To assist him in collecting their dues, they have from 25 to 30 Chhariburdars. These officers are not Brahmans, and take no share in the religious duties, which are performed by Adhikari Brahmans for the high castes, and by Vaishnavs for the low. Acharya Prabhu descended of the same doctor, and mentioned in my account of Puraniya, has about two-sixteenths. The descendants of Adwaita residing in Bholahat have about 2 anas. The Ramayits of the west have procured the remainder, except about 400 families belonging to Thakur Mahasay.

The Udasin Vaishnavs, who act as Gurus for the lower ranks, amount to 140 converts, and have not married. Many of them are vagrants, and 100 of the converts are in the capital, where the customs of the vicinity require a considerable restriction on the acts of the flesh.

Of the married Vaishnavs there may be near 700 houses, many of whom are the Gurus for the lower classes in the part of Bengal belonging to this district. There are besides about 50 houses of Gaur Vaishnavs, all married. None of the Sakhibhav Vaishnavs reside; but those of Puraniya act as Gurus for some people in this district. There are here no Narha Vaishnavs.

Confusion arises from the term Vaishnav being applied to the religious among the worshippers of Ram, as well as to those who adore Krishna; and the Ramanadis and Ramanyits or Vairagis are considered as the same, although the one are descended of Brahmans, and the latter Sudras. Those, who abstain from marriage, in this district amount to 18 Akharas; and those who have married to 35 houses, but a vast many strangers frequent the country. Some of the most remarkable convents of this order are dependent on the Mahanta, who resides in the Mastarami Akhara at Murshedabad.

The sect of Sivanaryar, of which I never before heard, say that this person was born as a Narayani Rajput of Sesana, three or four days journey west from Gazipoor. He set up as an incarnation of God, and he called those, who adopted his doctrines, Santas (pious), and does not seem to have established any hierarchy. Though dead, he is still called Guru, and his three sons are only called Santas, but are highly respected. He wrote several books, Gurunyas Santakari, Santabilas, Santaupades, Santaparwana, Santasundar, Santasagar, Santa Mahima, &c. The Gurunyas contains the first, and most essential doctrines, and is that in most common use. It is written in the vulgar language of the country, where the Guru lived. A little Sangskrita is intermixed. The sect seems to have been propagated by these books distributed among those who can read, who explain them to those who cannot, and the principal agent seems to have been Rokhanram, a Rajput at Barsundi near Gazipoor, who was a very intelligent person. Many go to him for advice, and he receives presents. The sons of Guru seem occasionally to travel, in attempting to

explain the doctrine of their father. My informant Bechuram is the most intelligent man at Mungger of this sect. He pretends to no superiority over the other Santas of the place; but every year all the sect assemble at his house on the Basantapangchami, and bring presents. A copy of the book is produced, and part of it read. Then it is laid down and receives offerings of flowers, red starch, betle, and sweet meats. The whole is thus consecrated, and divided among the assembly. Occasionally, at different times, two or three people assemble, but at no fixed times, and present offerings in the same manner to the book, and hear it read. The Santas ought to acknowledge no God, except Sivanarayan; but many ignorant persons cannot be persuaded to abstain, from the worship of destructive spirits, in cases of danger, especially if their wives adhere to the old doctrines. They consider, that Sivanarayan is omnipresent, and always existed, and that his appearance on earth lately was an incarnation for the instruction of mankind. All persons, who are not Santas, will undergo transmigration; all the good Santas go to Santades, or the abode of the pious, but bad men although believers, will be born again. They employ Brahman Purohits to perform the ceremonies at marriages, funerals, and births; but merely in compliance with the custom of the country. Every Santa observes the rules of the caste, to which he formerly belonged, and continues to intermarry with infidels. They do not attempt to instruct the low castes, and they cannot admit Moslems; because these, having lost their own religion, would have no caste, and no one would associate with them; but there seems to be no absolute law against admitting proselytes of any kind. When I asked for a copy of his book, the poor man seemed to think, that he had made a convert. It is said, that in the vicinity of Benares there are many Santas, especially among the military tribes.

The priests, who officiate in temples, are in Magadha called Panda, a title, that in the south of India seems confined to the Sudras, who officiate in the temples of Siva. The profession here is not considered as honourable for the sacred order; but less disgrace attends it in Magadha than usual, and the Pandas are not excluded from intermarriage with the highest families. In some parts the Zemindars take a share of the profits, which the priests receive: and there are

temples, which have endowments, and have no priests. There the Zemindar keeps a clerk, and takes the whole profit.

The young Brahmans usually pass four days in the state of Brahmachari, before they assume the thread. During this time they eat only once a day, abstain from salt, oil and animal food, and study forms of prayer.

No Brahman of this district, so far as is known, has become a hermit, nor has any one gone to Kasi to become a Gymnosophist. I saw a fellow on the rock near Sultangunj, who had reduced himself to this state, and was a most impudent and saucy beggar; but he was not of the sacred order, and I was happy to learn from himself, that the people treated him with neglect. In some caves dug into the rock at Patharghat five or six Tapaswis or penitents have taken up their abode. They are strangers, and sit constantly in their dens, feeding on what is given to them without solicitation. It is supposed, that they often want for a day or two at a time; but, when I saw them, they appeared to be in tolerable case. Two or three old women, one of whom formerly followed the camp, have dedicated themselves to God, and are called Vaishnavis, have procured some images, called their houses Akharas, and give instruction (Upades) to sundry persons, who worship Ram. One of them at Sibgunj has taken the title of Mahantini. No women have become Avadhutinis; but mendicants of the kind occasionally come. In the part of this district, that belongs to Behar, there are no Dols, like those of Bengal.

The purity of caste, among the high tribes, is preserved by assemblies (Pangchayit), in which all the members are equal. Among the lower tribes there are chiefs called Serdars, Chaudhuris, Mehturs, or Mangjans. The office is usually hereditary, but on complaint from his dependents they are changed by any person in power, such as the Zemindar, Tahasildar, or Darogah, who procures an order from the magistrate, who, if he chooses, confirms the change. Widows sometimes succeed to the offices of their husbands. The people under each chief are called a Chatayi, as all sitting on the same mat, an honour which they forfeit by acting contrary to the rules of caste; but the authority of these chiefs is not confined to matters of caste alone. No man will enter into any engagement to perform work without the order of his

chief, who thus makes a monopoly, in the true spirit of corporation. The chief cannot excommunicate without the consent of the principal persons of his Chatayi. The chief receives a commission on the wages given by persons of rank to the labourers, whom he has furnished, and has the chief share in the feasts, which are given at purifications. Under the chief is a person called the Barik, who receives the fines for transgressions, and with them purchases the feast. On dividing this, if there are any remains he takes them to himself; if there is a deficiency, he must furnish it from his own house. Some of the Baniyas, and all the inferior castes have chiefs.

Among all Hindus, wherever an animal of the cow kind dies by accident, such as by fire, by the bite of a serpent, or the like, or, if the beast dies when tied in the house, or to a post, the master of the animal incurs sin, and must perform a ceremony of purification (Prayaschitta). Certain Brahmans, skilled in the law, point out the ceremonies proper to be performed, according to the nature of the case; and, in some parts of the district, the Zemindars have appointed certain Brahmans for the purpose, and no others are allowed to give their advice, or rather to issue their orders.

At Bhagulpoor there is a small church belonging to the Roman Catholics, and about 50 Christians of that persuasion. Half of them are descendants of Portugese, and the others are native converts, who retain their own dress, and language. The priest is a native of Milan, sent by the Societas de propaganda fide; and, so far as I could judge from a short interview, was a man of decent manners and education. He has charge also of the flock in Puraniya, amounting, as he says, to about 40 persons.

CHAPTER IV.

THE NATURAL PRODUCTIONS OF THE DISTRICT OF BHAGULPOOR.

ANIMALS.—The most common monkey in this district, and the most destructive of the wild quadrupeds, or rather as the French naturalists say, of the wild four handed animals, is the Hanuman. This animal seems confined to certain territories in a manner, for which I cannot well account. On the north side of the Ganges there are none, which occasions no difficulty, as the river is too wide for them to cross; but, although they are numerous in almost every wood in the district, and are exceedingly common in the town of Bhagulpoor, there are scarcely any in Rajmahal or the low country S.E. from it, nor are there any in Mungger, Suryagarha, or the adjacent villages. There seems to be nothing in the situation of these places, that can occasion the difference. I presume, therefore, that the people of Rajmahal, Mungger, &c. resist the incursions of these destructive animals with more vigour, than the consciences of the people of Bhagulpoor, and of other sufferers would admit. The people of Mungger, indeed, deny their using any force or violence, and pretend, that when a Hanuman comes to invade their property, they merely make a noise, and use threats, but this I have seen tried very often with no effect, and I have no doubt, that more severity is used, but this is looked upon by so many as sinful, that the poor people, who defend their property, are afraid to avow their industry. I have also no doubt, that a very moderate exertion of violence might altogether expell these pests, and the havoc, which at present they commit on the crops, is very great. To destroy one of them is considered almost as great a sin as to kill a cow; and moreover it is imagined, that such an action is exceedingly unlucky, and that where a Hanuman has been killed all the people will soon die. His bones also are exceedingly unfortunate, and no house built, where one is hid under ground, can thrive. The discovery of these bones, or the ascertaining, that none such are concealed, where a house is to be

built, is one of the employments of the Jyotish philosophers of India, so highly vaunted for the purity of their science. It is perhaps owing to this fear of ill luck, that no native will acknowledge his having seen a dead Hanuman; for it can scarcely be supposed that the animals conceal their dead, as many of the natives suppose. In the town of Bhagulpoor and some villages they are far from being shy, but have no sort of tameness, and in the woods they are very noisy, but shy. They herd in considerable numbers. The short tailed monkey is also pretty common, on both sides of the Ganges.

The black bear of India (Bhal) is found in all the woods of this district on the south of the Ganges; but, except towards the southern boundary, is not very numerous, and does little harm. Sometimes, however, the bears kill a man; but they never attack cattle.

The *Ursus indicus* of Shaw is found on the hills south from Mungger, where it lives in holes under large stones or rocks. It is called Bajrabhal, or hard bear, because it may be beaten very much without being killed. These animals live in pairs or families, and eat frogs, rats, white-ants, and other insects, for which they dig. The people here have never seen this animal digging up graves, nor eating dead carcasses, as I formerly heard was its usual custom. In this district the Indian *ichneumon*, or Biji, is pretty common, and undoubtedly kills, and eats serpents, on which account it deserves the utmost protection. Had Hindu fable been directed to such a laudable purpose, it would have merited some excuse; but in general its object seems to have been to recommend whatever is useless, and often what is prejudicial. On the banks of the Ganges there are many Otters.

The Tiger or Selavagh in this district is pretty common, but it cannot be said to be very destructive. It is not beasts of prey, that are most prejudicial to mankind. Those which attack the sources of subsistence, such as monkies, hogs, deer and elephants, do much more harm. I am indeed persuaded, that the tigers, by destroying hogs and deer, do more good than harm, at least in a district, where the two latter animals are so numerous and destructive.

Of the two large spotted animals of the feline genus that are common in India, I saw only the former. The Harvagha or Harak, derives its name from eating bones; for it pos-

sesses so little swiftness that it cannot overtake any living animal. It is said to resemble in size the spotted tiger or leopard; but it has about the loins a peculiar weakness, to which its want of swiftness is attributed, and it is striped like a tiger, not spotted like a leopard. It was said not to be uncommon in the southern parts of the district, where it remains the whole year; but, although I have offered ample rewards, I have not been able to procure a specimen dead or alive; and the leopard at Mungger is called Lakravagh.

The hyæna or Lakravagh in this district has acquired an uncommon degree of ferocity, is said to carry off goats, calves, and sometimes even children; for it is a bold animal, and enters villages at night, which tigers or leopards seldom do, at least with an intention of attacking the human species. The Kohiya, although I have never been able to procure a specimen, is undoubtedly an animal of the canine genus, of which I have heard reports from a great variety of places in India, and have been favoured with some drawings. It frequents the southern parts of the district; but does not breed there, nor does it come every year. It usually appears in February, coming in packs of from fifteen to twenty, and hunts in company. On its arrival, all other wild animals instantly fly; for it attacks even the tiger without fear, and is supposed to fly immediately at his eyes. It is, the natives say, like a dog, but longer in shape, has a black muzzle, and is of a red colour, without spots. The Kohiya occasionally kills calves, taking them to be deer, which are its favourite food; but the good which it does in driving away other wild animals, is ample compensation. Such is all the information that I have been here able to procure concerning this animal, which I suspect is the real *canis aureus*, or according to Buffon, the *pantheros* of the ancients; while our jackal, which has in its colour nothing red, or still less golden, seems to be the *adive* of the great naturalist of France, a name which in the dialect of Karnata merely implies any thing wild.

This jackal in some parts of the district, especially in the part which is included in Gaur, is more numerous and noisy than I have any where else observed. It is not only during night that one is there annoyed by their dismal and discordant howlings. This gave me an opportunity of ascer-

taining that it is this animal which makes the howl, resembling somewhat the word Phao, concerning which the natives are very much divided, some asserting that this noise is made by the jackal, while others allege that it is the voice of the fox. The natives allege, that the jackal is most noisy at the end of every watch (Pahar) of the night; and so far it may be allowed, that for a little they usually set up a general howl, and then for some time continue silent. So indistinct is the native nomenclature, that in Bengal this wretched animal and the powerful royal tiger are often called by the same name, Siyal. When the growling of a tiger is heard at night, a Bengalese will not say that it is the roar of a tiger, least the animal should instantly rush in and devour him; at night he always speaks of the tiger by the name Siyal; and it is only in the day that he ventures to call the animal a Vagh. The jackals, called Gidar in the Hindi dialect, are accused of being great thieves, and of carrying away clothes, money, and many other things, for which they can have no use. The fact, I believe, is, that they sometimes carry away parcels, thinking that they contain food. At Phutkipoor, a bag belonging to one of my servants, was taken out of his tent, and in the morning its contents were found scattered about at a little distance. This was attributed to the jackals, and perhaps with reason, as a thief would probably have carried away the articles, which were wearing apparel. The wolf (Hundar) is said to be sometimes but rarely seen in this district. The Indian fox (*Canis Bengalensis*, Pennant) is very common, and is a pretty harmless creature.

According to the report of the natives, all these beasts of prey may annually kill 20 people, and 250 head of cattle. The porcupine, called here Sahi, is not very common, which seems to be partly owing to its being eagerly sought after by many who eat it, and partly to the soil being too stiff. In the hills it is more common than on the plains, and finds shelter under large stones and rocks. The Indian hare (Khurgosh), is much more common, although a good many are killed for eating. In general, however, the natives seem to give a decided preference to the porcupine; although both are admitted to be pure food. In every part of the district the small striped squirrel (Gilhari Lukkhi or Kat Biral) is very common. The *Sciurus Indicus* of naturalists is

not uncommon in the woods of Mungger, where it is called Rato. Except when breeding, it is a solitary animal.

The animal of which the natives are by far the most afraid, and to which they attribute their having deserted many villages, is the elephant. This animal is, however, confined to two parts. The greatest number frequents the Rajmahal hills and their vicinity, and it is said, that it is within these 30 or 40 last years that the wild elephants have made their appearance. The stock is said to have been some that made their escape from the Nawab's stud, which is often sent for forage to the vicinity of Rajmahal. So far as I can learn, there may be in all 100 head, partly on the east, and partly on the west side of this range of hills. From the latter, small herds sometimes make excursions so far as the hills south from Mungger; but this is not usual, and hitherto these animals have in general confined their depredations to within seven or eight coss of the Rajmahal hills.

The natives, I am persuaded, greatly exaggerate the injury done by these animals; but there can be no doubt, that these herds are chiefly fed on the crops; for in many woods frequented by the elephants there is scarcely any forage that they will eat. Palms, ratans, scitamineous plants, bamboos, reeds, and marsh grass, are there very scarce, nor are the fig-trees, which the elephants eat, common any where except near villages. It seems therefore surprising that the elephants have not entirely resorted to the western hills, where the bamboo is very abundant, and where in some places there is a tree called Galgal, of which they are said to be fond. This circumstance, in my opinion, shows that the elephant is not an adventurous animal, and might be easily repelled.

The alarm that the elephants occasion is exceedingly great. One night that I lay close by the hills, although I had a guard, the men of the village close by my tents retired at night to trees, and the women hid themselves among the cattle, leaving their huts a prey to the elephants, who know very well where to look for grain. Two nights before some of them had unroofed a hut in the village, and had eat up all the grain, which a poor family had preserved in its earthen store (Kuthi). On the north side of the river, a colony of elephants, similar to that in the southern parts of Puraniya,

frequented the marshy woods of that part, and occasioned an equal alarm.*

In most of the wild parts of the district, the rhinoceros is occasionally but very rarely seen. Formerly, in the marshes at the foot of the hills between Rajmahal and Sakarigali, there were many, and even now there are always some, but they have been so much disturbed by European sportsmen, that they have become scarce, and exceedingly shy. They never did much harm. In almost every part of the district wild hogs are to be found, and even in Mungger, its best cultivated part, they have been known to come into the fort; but in general they are neither numerous nor very destructive; and are worst on the north side of the Ganges. In the wilder parts they seem to be kept within bounds by the number of persons of low birth, who take a delight in hunting them on account of their unclean flesh.

The Indian term Harin, is difficult to explain. It includes not only the Moschus, Antilope, and Cervus of European zoologists, but also a wild species of the Bos, while it excludes the wild buffalo. The *Moschus Memina* is a pretty little animal, not much larger than a hare. Intermediate between the Moschus and Cervus, as having the tusks of the one, and the horns of the other, is the rib-faced deer of Pennant, which is pretty common among the hills. The Cervus Axis in many parts is exceedingly common and destructive. It is perhaps the finest of the deer kind, not only on account of its beauty, but of the facility with which it is tamed.

A very beautiful animal of the genus *Antilope* is pretty numerous. It is found in all the woods of the southern parts of the district, and goes in small herds or families. It resembles very much the Nilgayi, or *Antilope picta,* and may perhaps be considered as a mere variety of that fine animal; but it is much the colour of the stag, and grows to the size of a small horse. From its make, it would appear to possess both great strength and agility, and its shape, carriage, and motions are graceful.

The *Antilope Cervicapra* is the wild quadruped of which I saw the greatest number in this district, but that probably

* They are sometimes taken in snares by tame elephants; but a very small number survive the loss of their freedom.—[Ed.]

was owing to its frequenting open naked plains, while the deer and hogs, in the day at least, usually conceal themselves in woods and thickets. It goes in small herds of from three to seven. I have not observed more than one male with a herd, but I have sometimes seen solitary males hovering around. I suspect, that the males, so soon as they become fit for procreation, fight until only one remains alive, or at least until all the weaker competitors are compelled to retire from the herd. It seems difficult to account for the bounding which this animal uses in running, when not hard pursued; for it very much impedes their progress, must be very fatiguing, and seems to be totally useless. I at one time thought, that it might be with a view of enabling the animal to see if any enemy was concealed behind bushes or other cover; but I have observed them to use this manner of advancing when on exceeding bare plains.

Along with musks, deer and antelopes, under the generic name of Harin, the natives class an animal of the genus *Bos*, which in the Hindi dialect is called Gaul or Gaur Harin, and in the Bengalese Gyal Harin. I could procure no specimen, except a pair of horns without the skull. The Gaur is represented as extraordinarily fierce and untameable, which is by no means the case with the Gyal of Chatigong; but I have heard from Mr. Maera, surgeon there, that in the eastern woods an animal resembling the Gyal, only of extraordinary ferocity has been sometimes found. The Gaur is said to be about the size of a buffalo, and in this district is rare; but in all the wilder parts of the south it is occasionally seen.

The wild buffalo, so common in the eastern parts of Bengal, is scarcely known here. No native of this district, it was alleged, makes hunting a sole profession; but the men of the hill tribes pass a great deal of their time in this exercise, partly from the love of sport, and partly to supply themselves with food. The boar, deer, antelope and porcupine are their common objects of pursuit, and the bow and arrow their usual implement. The arrows are in general poisoned with the root brought from Nepal. Some of the ruder tribes towards the south use the same means; but in most places the farmers have nets, with which they take these animals; and hares are so abundant, that they are knocked down with sticks, although they also are often caught in nets. In many

places dogs are trained to drive the wild animals from their cover, and in a few the matchlock is used in their destruction. On the north side of the river it is in the rainy season chiefly, that the farmers hunt. The animals then are often so surrounded by water, that even tigers fall an easy prey. In the Ganges porpoises are exceedingly numerous, and are occasionally caught in the fishermen's nets, and their oil is used for the lamp.

Birds of prey are numerous, but do little harm, carrion and wild animals giving them a copious supply of food. Some Rajahs keep tame hawks for sport. Ducks, teals, snipes and the Bageri lark or Indian Ortolan are taken; and in some places we heard that partridges and quails were caught, and fattened by the natives for their own eating. The small singing birds, which the Mirshekars catch with nets, are chiefly a species of the Loxia. The Aggin, a lark very much resembling the *Alauda arvensis* of Latham; but it is considerably smaller, and its note not so strong as that of the sky-lark of Europe, its manners are very similar; the Chandul is a crested lark.* The birds that are most destructive to the crops are the crane, parakeet and peacock. The latter is exceedingly numerous, and it is good eating.

Near the Ganges, and in the larger of its branches on the north side, tortoises are very numerous; they are caught by the common fishermen and are saleable; but except among the lower tribes are in little request. Some are sent from Rajmahal to Moorshedabad, and to the mountaineers. At Mungger there are reckoned seven kinds. First, Singgiya, which is said to grow to between five and six feet in length; the other kinds vary from two feet to four feet in length. All these tortoises lay their eggs in the sand, digging a hole for the purpose, and covering them with sand. The season is from about the 1st of March to the middle of April. On other occasions the whole continue always in the river, except the Katha, which occasionally during the afternoon basks on the shore. They are supposed to feed chiefly on fish; but they are also thought to eat shell-fish, the reed called Kosala, the roots of which are inundated, and mud. Their eating the Kosala appears to me doubtful; and what the natives mean

* See Puranya for a description of various birds.—Ed.

by eating mud, must have arisen from their having seen these animals searching among the mud, for worms, snails, or such like animals.

Crocodiles, both of the Ghariyal and Boch kinds, are numerous in the Ganges, and still more so in the Tilyuga. They are occasionally caught in the fishermen's nets; but are not intentionally molested, except on the north side of the Ganges, where the low tribe Musahar pursue them with spikes, and extract the oil. The Ghariyal when caught, is eaten by the fishermen, as well as the Musahar; but by no others. The Boch is rejected by all. Some invalids, whom it was attempted to settle on the banks of the Tilyuga, assigned the number of crocodiles as a reason for having deserted their lands; but I did not hear that in the whole district these animals had ever destroyed man or beast. I have however heard of the Boch having bitten people very severely. In one tank I heard of their being tamed to a certain degree, as mentioned in my account of Puraniya. Lizards are not common. Serpents are certainly more numerous and destructive than in any of the divisions hitherto surveyed, and it was alleged, that annually from 180 to 200 persons are killed by their bites. The Maler on a hill near Paingti shewed me a hole in a rock, opening into a hollow space close by the path leading up to their village. They said, that this hole was the abode of a very large serpent, which they considered as a kind of god. In cold weather they never saw it; but in the hot season it frequently was observed lying in the hollow before its den. The people pass it without any apprehensions, thinking that it understands their language, and would on no account injure a Maler, should even a child or a drunken person fall upon it. The animal is said to be almost as thick as the body of a man, and is exceedingly slothful. How it procures food, the people cannot say; but they think that it eats deer and hogs. Several such serpents were said by the chief of the village to be in other parts of the hills belonging to this tribe.

In the interior of the country south from the Ganges, fish are very scarce; the rivers, for a great part of the year, are almost dry, and there are few marshes, ponds, or lakes. In the rainy season, however, a few are generated, and are mostly caught by the farmers, as the waters dry up. Near the Ganges again, and especially near the Tilyuga or Ghagri,

on the north side of the great river, there is a great abundance of fish; but during the floods, owing to the want of skill in the fishermen, the supply is every where scanty; and at Bhagulpoor, owing probably to some defect in the police, the scarcity prevails at all seasons, while at Mungger and Rajmahal, not more favourably situated, the supply during the dry season is uncommonly copious, and the quality tolerable.

Some fish are dried, and sent to the interior, and to the adjacent hilly parts of the Virbhum district; near the Ganges this kind of food is not in request; nor do the people there prepare the balls called Sidal, formerly mentioned. A large proportion of the fish used is far advanced in putrescence before eaten. Rahu, Katla and Mrigal, being sent to Moorshedabad in considerable quantity, sell about one-fourth dearer than the other kinds. In the dry season these valuable species sell at Mungger, for from $2\frac{1}{2}$ to 3 paysas a ser of 84 s. w. (about $2\frac{1}{2}$ pound), 64 paysas being equal to a rupee.

Some of the Banpar Gongrhis at Mungger are said to strike large fish with the Gig (Dukti) which is chiefly done in the floods. Some Kewats called Duharu or Divers are said to pursue fish under water with a spear, and I was gravely assured both at Suryagarha and Mungger, that these men could continue under water a Hindu hour (24 minutes), but two men, that I tried at Mungger, did not complete one minute, although one of them brought up a prawn. The number of fishermen stated to belong to this district was 3800 or 3900; but many of these are employed part of their time gathering tamarisks for fuel, in harvest, and in working the boats which belong to the district. The number actually employed may therefore be 7000; and allowing, that each fishes eight months in the year, and catches five rupees worth of fish monthly, the total value will be Rs. 2,80,000, of which the owners of the fisheries may be able to secure a third part. No fish, so far as I heard is sent to Calcutta. The sales are managed as in Puraniya.

The fishermen during the fishing season can clear from two to six rupees a month, that is on an average four rupees, and the people, whom I employed merely to buy such fish as I wanted, complained of four rupees a month, as being hard wages. The following is a list of some of the species*, which

* Dr. B. goes into a detail of many other species which it is unnecessary to give.—[ED.]

I procured: I was a good deal surprised to find so high up a fresh water river as Mungger, a species of *Raia;* but I am told, that this fish is not uncommon so high up even as Kanpoor (Cawnpore R.) This species approaches nearer the Lymme described by Lacepede, than to any other mentioned by that author; but may readily be distinguished by having a fin on the fore part of the under side of the tail. It does not grow to a large size, at Mungger is uncommon, but is thought very good. The Phokcha of Mungger differs from the species of Tetrodon, called by that name at Nathpoor. It is however very probable, that both may be called by the same name, as they have strong affinities. At Calcutta this is called Gang Potaka, from its frequenting rivers, while the other is most commonly found in marshes, tanks or ditches. The fish, which I am now describing, grows to about six inches in length; and, when irritated, does not swell near so much in proportion as the other kind. Bamach is an ugly animal, even for an eel, and may perhaps be the Murenetachetée of Lacepede. Europeans, who like eels, think this very good, but it is not common. When full grown it is said to be two and an one-half cubits long, and one cubit in circumference; but I strongly suspect, that the latter dimension is exaggerated, for one, which I procured, 38 inches long, was only six and one-half inches round. It is a very distinct species from the Vamos of the lower parts of Bengal, although the names are undoubtedly the same.

The Pathri is a species of Lutian, which by the Europeans at Calcutta is often called a whiting, being a fish nearly of the same size, and somewhat of the same taste with our European fish of that name, although it is inferior in quality, and in the eye of the naturalist has little or no affinity. The Kalbangs (a proper Cyprinus), when caught in water, that is pure, and which has a hard bottom, assumes a different colour from what it has in dirty pools, many of the lateral scales being then of a coppery hue. In this case it is called Kundhna. The Rohu, that most elegant of carps, called Rohit in Bengal, is here perhaps the most common fish; but, being generally caught in dirty stagnant pools, it is seldom very good. Excellent Rohus are, however, sometimes procured from the river. No fish seems so much to have attracted the attention of the Brahmans.

Oblong crustaceous fishes are in very great abundance through the whole course of the Ganges, and at Mungger those about the size of a prawn are remarkably well tasted. Small crabs are common in the inundated lands. Insects are very troublesome and destructive. I have not however heard, that Locusts have ever been seen; on the south side of the Ganges the white ant (Diyak) is more destructive, than in any part, that I have ever been. In Gidhaur many heaps of earth, much larger than a native hut, were shown me as the remains of their work. Flying bugs are exceedingly troublesome.

Honey bees are numerous in the woods, but no person makes a profession of gathering the honey or wax, nor is there any rent exacted. Many farmers, however, at idle times, collect both; and usually present a part to their landlord or his agents. The hill tribes gather a good deal of honey, which in general they eat; but those near the great road dispose of it to Europeans, to great advantage, under the pretence of giving presents. In the high parts of the district there are few or none of the shells, from whence lime is prepared. In the low lands they are in abundance, similar to those in Ronggopoor.

Plants.—This district is an excellent field for a botanist, although the plants bear so great an affinity to those of the south of India, now best known to Europeans, that I have met with much less new matter than I did in the Ronggopoor district. In most parts of this district the whole waste land is called Janggala, where covered with trees it is called Katban, where covered with thick long grass reeds or bushes, especially tamarisks, it is called Bangjar, and where small bushes are thinly scattered, the waste is called Jhangti; but these terms are not applied with much accuracy, nor are the distinctions of great use. It is estimated, that there are 585 square miles of inundated land occupied with reeds, bushes, and tree. 383 square miles of this are on the north side of the Ganges, and the greater part of the remainder is near that river. A large proportion is covered with tamarisks, about an equal quantity with reeds. A less share with stunted woods of the Kayar (Trees, No. 43), and about an equal quantity with rose trees, and finally the largest share is covered with very coarse bad grass. The woods may perhaps amount

to 70 square miles, exclusive of an equal quantity of rose trees, which do not rise to a height that can entitle them to be called woods, although the perversity of the English language requires that a bush bearing roses should be called a tree.

In woods, thickets of bushes, and deserted villages, which have become totally wild, there are 1731 square miles of land sufficiently level for the plough, and there are 1146 square miles of hills, that are covered with woods. Including the tamarisks we have therefore in all forests and thickets almost 3100 square miles. By far the greater part of these is kept in a very stunted condition by the following causes. In many places the species, that grows, never reaches to the size of a tree, which is especially the case with the rose and tamarisk. In many places, especially on the hills, there is no soil capable of supporting large trees. This cause, however does not operate to a very great extent. Every year in spring the whole forests are burned. This destroys all rotten branches and leaves, and certainly tends greatly to improve the air, to keep open the country and to meliorate the pasture, but it no doubt checks the growth of the tree. It would indeed appear wonderful to any one, who saw the conflagration, at a time when every thing is parched like tinder, how any tree can escape destruction. It is supposed by many, that these fires are spontaneous.

The extracting rosin from the *Shorea robusta* tree keeps a large proportion of that valuable timber in a very stunted condition, as the tree is always killed by the operation. This is a perfectly wanton abuse; for a tree, if allowed to grow large, would give the rosin equally well, and when the rosin has ceased to flow, might be cut down with equal advantage, as if rosin had not been extracted. The extraction of Catechu is managed with as little economy. The people, not only before the trees have acquired an adequate size, begin to cut them, but they even dig up the roots; yet it is probable, that one square mile planted with the Mimosa, which yields this drug, if divided into 20 equal portions, one of which should be cut every year, would supply 10 times the quantity, that is now made in the country. The rearing the silk called Tasar keeps the trees employed in a stunted condition. The soil fittest for the tree is a poor red clay, and the trees are so

pruned, that they are far from injuring the crops, which here thrive best on such land, namely Sesamum and the pulse called Kurthi. A very few square miles, regularly planted with the proper trees, would supply 10 times the quantity now raised, and not one acre of it need be fallow, oftener than was necessary to prevent the soil from being exhausted.

The Khajur in this district is an object of considerable importance. I have before noticed its great affinity to the *Phœnix* or date, and, after having compared the fruit and whole plant with the description in Kœmpfer, I am inclined to think, although it was considered by Linnæus as forming a distinct genus, that it cannot even be called a distinct species, and does not differ so much from the date of Arabia as a crab apple does from a pippin. The ripe fruit is exceedingly sweet; but is covered by so little pulp, that it would be unfit for preserving. The only difference I can observe is, that in the date the root is creeping, and sends up young shoots round the parent stock; but such I have never observed in the Khajur. If such a want in the latter does not depend on neglect of cultivation, the species may be considered as distinct, and there is no hope of improving our tree to an equality with that of Arabia, as no good date is there reared from seed: but if by care young suckers could be procured, then by a selection of these from the best kinds, by copious watering and plentiful manure, the quality of the fruit might be improved, and we might have proper dates, which would be one of the greatest possible improvements on the hilly parts of India.

A tree is fit for being cut when 10 years old, and lasts about 20 years more, during which time, every other year, a notch is cut into the stem just under the new leaves that annually shoot from the extremity. The notches are made alternately on opposite sides of the stem. The upper cut is horizontal, the lower slopes gradually inward from a point at the bottom, until it meets the upper, and a leaf at this point collects into a pot the juice that exudes. The season commences about the beginning of October, and lasts until about the end of April; after the first commencement, so long as the cut bleeds, a very thin slice is daily taken from the surface. In from two to seven days the bleeding stops, the tree is allowed an equal number of days rest, and is then cut

again, giving daily two sers (88 s. w.) of juice. In the afternoon the men cut the trees and fasten the pots, and in the morning they carry the pots to the shop, where it is to be retailed, and a man can manage from 10 to 16 trees. The juice when fresh is very sweet, with somewhat the flavour of the water contained in a young cocoa-nut. This is slightly bitter and astringent; but at the same time has somewhat of a nauseous smell. Owing to the coolness of the season it does not readily ferment. It is therefore collected in large pots, a little ($\frac{1}{16}$th) old fermented juice is added, and it is exposed to the sun for about three hours, when the fermentation is complete, and it sells at 1 paysa ($\frac{1}{64}$ part of a rupee) for the ser, which is nearly $\frac{1}{24}$ lb. avoirdupoise. A man therefore should daily collect about 4 anas worth; and his wages being 1½ ana, the retailer has 2½ anas a day on each man that he employs; but then he must pay the tax, amounting, so far as I could learn, to about one ana daily on each person employed, and he must also pay the rent on the trees, which usually amounts to ½ of the juice or 8 anas each tree for the season. A tree therefore gives annually about 64 sers of juice, or bleeds about 32 days. No sugar is made from the juice; ½ ser or a pint of the fermented juice makes some people drunk, and few can stand double the quantity. Mats for sleeping on are made of the leaves, and are reckoned the best used in the district.

The Tal or Tar is the *Borassus flabelliformis*, usually called Palmira by the English. Its stem is seldom applied to use, although few materials are more valuable for making good thatched roofs. The leaves are never used for thatch, but are made into mats, on which people sleep, and which are next in quality to those made of the Khajur. They are also used as a kind of umbrella to keep off rain. Although the juice is not so sweet as that of the Khajur, the wine, it is said, becomes stronger, and it ferments without addition, or without being exposed to the sun; but this is probably owing to the heat of the season, as it begins to yield juice about the middle of March, and the season lasts for two months. Trees may be had which will bleed throughout the rainy season, and the juice of such is used for fermenting bread. This palm is often planted, in rows, by the sides of roads, or round new tanks; but by far the greater part springs spontaneously from

seed scattered by the animals, which eat the fruit. Neither it nor the Khajur would however appear to be native plants; and, where found in the woods, may be always traced to former villages. The palm does not begin to flower until between 25 and 40 years old, and lives to an indefinite but very extended old age, far beyond the recollection of man. After it begins to flower it continues ever afterwards at the proper season to yield juice, as it is the flowering stem (spadix) which is cut, and its bleeding seems to debilitate the tree no more than if the flowers or fruit had been allowed to form, which the operation prevents. Three times a day a thin slice is cut from the point of the unopened spadix, until it entirely withers, and a pot is kept constantly suspended under it. New spadices shoot in succession, so that the tree bleeds constantly for two months, beginning about the end of April; and as I have said, a few straggling spadices occur throughout the rainy season. I think that in the account of Puraniya I have mistaken the season in which this juice is extracted, which I should think must be the same in both districts. It must however be observed, that in Bhagulpoor it is only the male spadices which are cut; but I am told, that after the fruit is ripe, in August or September, the female spadix may be cut, and would bleed without injuring the tree. A tree gives daily about 2 sers or 4½ lbs. of juice, worth about 2 paysas (each equal $\frac{1}{64}$ part of a rupee), that is, the tree, during the season, gives to the value of about 15 anas of Tari, and where cut for wine, each usually pays 8 anas to the landlord.

The fruits of a numerous class of Indian *Terminalias* are winged and dry, and I have no doubt that these kinds are of the same genus with the Chuncoa of America. Of these I have in this district observed four kinds. The first and most important is the Asan of the natives, which Dr. Roxburgh in his MSS. calls *Terminalia alata pilosa.* Where allowed to remain undisturbed, it grows to be a very fine tree, with a remarkably straight stem, and may be known at a considerable distance by its bark being dark brown, and cut into small squares by deep notches, vertical and horizontal. The same, however, takes place in a kindred species, the Moti of Mysore. The bark of both is burned, and the ashes serve in place of lime to chew with betle. The wood is reckoned strong and

durable; and, although it does not take a polish, would for many purposes be very useful. The chief use to which the tree is however applied is to rear the Tasar silk, of which I shall here give some account. The tree abounds chiefly in the part of the district that is situated east from the Chandan, and between that and the Rajmahal hills, and there occupies as large a space as the bamboo does towards the west. The animal is reared by all castes, who inhabit these parts, but in general by the armed men employed under Ghatwals to preserve the peace of the country. With a view perhaps of securing the employment to themselves, they have established certain rules of purity, as they call it, which they allege are absolutely necessary; and they allege, that any infringement would totally destroy the insect. Women, who are best fitted for such a work, are entirely excluded from it as totally impure, nor are they permitted to approach the place; and while employed in this work, the men totally abstain from the company of their wives. Again most of the low vile castes are excluded by their appetites, abandoned to the gross impurity of animal food. The breeders eat sparingly, once a day, of rice cleaned without boiling, and seasoned only with vegetables. They are considered also to preserve their purity by never employing the washerman nor barber.

Concerning the method of procuring the seed cocoons, I found in the accounts of the natives the utmost difference. In Bangka it was stated, that the only good seed was procured from the forests, from whence the spontaneous cocoons were brought by people of wild tribes, were purchased by merchants, and distributed among those who rear the worms. From these cocoons three successive broods are reared, but those reared from the wild cocoons (Dhaba) are the best; the others, Sarihan, Jarhan and Langga, gradually degenerate. At Tarapoor and Lakardewani it was stated that the kinds are quite distinct, that the good Tasar (Dhaba) is always reared from cultivated cocoons, some of which are preserved through the year for propagating the breed, and that the wild cocoons are only used for this purpose, when from accident and carelessness the proper seed is lost; and the Tasar, which these give, is always of an inferior quality, but is of two kinds, Sariban and Langga, the last of which is very in-

ferior, and is seldom employed. Each kind, according to these people, breeds twice in the year. In Tyezullahgunj again it was said, as in Bangka, that no seed was preserved through the year, that in the beginning of the season wild cocoons were procured, but that the silk which these gave was of inferior value, and that the cocoons of this brood were chiefly preserved for producing a second, of which the silk was of the best kind. These accounts are in direct opposition to each other, nor can I take upon myself to assert which is true, or whether any of them is false, although I am inclined to rely most on the account given in Lakardewani and Tarapoor; but it may happen that such different practices really prevail, and that the influence of them on the quality of the silk is quite imaginary: for I would observe, that at Bhagulpoor all the cocoons are usually sold indiscriminately as of the same value, and very often intermixed. The weavers indeed say, that there is a difference in the quality of cocoons, and that one kind (Dhaba) is more easily wound, and gives a larger quantity of silk, while the Sarihan produces ¼ less, but it is of a better quality. The merchants who deal with the simple breeders endeavour probably to keep up distinctions, of which they avail themselves. They pay in advance for the whole, and give a very low price; but they no doubt are often defrauded by people who never fulfil their engagements.

Among other ridiculous imaginations concerning the insects propagated, as I suppose, to impress the people with an idea of their purity, it is supposed that a Tasar female moth will not admit the embraces of a male of the same paternal family with herself. The breeders however very judiciously leave the whole adjustment of this delicate point to the discretion of the females. The seed cocoons are placed on a large flat basket; and when the moths burst the cocoons, they are allowed to form such connections as they please. In from 15 to 20 hours afterwards the males are thrown away, and from 20 to 25 impregnated females are placed in a cylindrical basket with a narrow mouth, which is covered with leaves, and some leaves are laid on the bottom of the basket. In some places an earthen pot is preferred. On these leaves, in the course of the day, the females deposit their eggs, and are then thrown away, and the eggs are placed in small baskets made of the Bhela leaves. On the ninth day afterwards the

eggs are hatched; and the baskets on which they are lying are put upon a tree, over the leaves of which the young insects immediately spread. When they have consumed these, the worms are removed to other trees, and in 36 days from being hatched they begin to spin. In 15 days this operation is completed, when all the young branches are cut, and the cocoons are thus collccted with very little trouble. The only operation at all troublesome is the removing the worms from one tree to another, and this might probably be avoided by putting no more worms at first on each tree than it should be able to maintain. The worms however must be watched, as crows and other birds and hornets are apt to destroy them. The whole space of time occupied by the two crops may be about five months, beginning about the first of July, and ending about the last of November. A great number of the cocoons preserved for seed burst, and these can only be sold for about half price. Those originally intended for sale are killed by being put in boiling water, and then dried in the sun.

In procuring food for these worms, the only trouble is to select a piece of ground on which the Asan tree grows, intermixed with few others. These latter, and all bushes ought to be removed, and all the large branches of the asan tree should be lopped near the stem, and young shoots permitted to grow; for these produce large succulent leaves fit for the worm. The worms are only applied to the same tree once in the two years, a whole year being necessary to allow the new shoots to grow.

The Bassia, mentioned in my accounts of Dinajpoor and Puraniya, is found in great quantities, both entirely wild, and allowed to grow like the palms, in a half-wild state, near the villages on the skirts of the forest. In the wilder parts it is called Mahul, but in the purer Hindi dialect its name is Mahuya. It does not grow in any part of the district that belonged to the province of Bengal, and on the north side of the river there are only a very few trees. The Bassia grows to be a very fine spreading tree; and thinly scattered over the poorer fields of a red soil, where it seems to thrive best, its shade by no means injures the crops of Sesamum or pulse, which are those that thrive best on such soils. The timber gives tolerable planks, that are commonly used for making

doors and window shutters, because, from being preserved, the trees grow to a large size. The ripe kernels are eaten like almonds, but are not good. They also give an oil, four sers of kernels yielding one of oil. After being dried in the sun for some days, the kernels are beaten in a mortar, and then put in a common oil mill and pressed. In cold weather the oil is thick like Ghiu; but in hot it becomes liquid. In most parts it is only used for the lamp, having a bitter disagreeable flavour; but amidst the forests the poor use it in cookery, and take out the bitter taste by boiling the oil, and while boiling, by sprinkling it with a little water. It is not sold, the poor who use it, make it on their own account. The most important part of the tree is its flower, which falls during the morning, after having expanded in the evening. These flowers being succulent, resemble round berries, and are filled with a thickish sweet juice, which would not be very disagreeable, had it not an uncommonly strong narcotic smell, worse perhaps than even that of hemp. Deer, however, monkies, and other animals, are very fond of these flowers; so that the trees, where proper care is taken, require to be watched. The ground under the tree should be smoothed, so that the flowers may every morning be collected by sweeping. The flowers are spread on mats, or on a piece of cleared ground, and dried in the sun, and are then fit for sale. A tree gives from 5 to 30 sers (80 s. w.) or about from 10¼ to 61 lbs. of dried flowers; but at Mallipoor it was alleged that were care taken to exclude deer and monkies, double this quantity might be procured. Formerly, it is said, the flowers were wont to be sold at the tree for from 6 to 3 *mans*, or from about 493 to 246 lbs. a rupee; but in the year 1810-11 at Bangka, close to the forests, they sold at 1¼ *man*; and in 1811-12, at Mungger, they rose to 1 *man*, while 1½ *man* is there considered as the common price. In most places no rent is taken for these trees, in others a trifle of a rupee for from 16 to 25 trees is demanded, and little or no attention is paid to preserving them, but the increase of price will probably produce a greater care.

The principal use of the Mahuya flowers is for distillation, of which an account will be afterwards given; but they are also used in diet. People in easy circumstances, as a luxury, fry the fresh flowers in butter, after they have been boiled

in a little water to dryness. In the southern parts of the district the poor are compelled to derive from this flower a portion of their ordinary nourishment. In common years, for about five months, they use partly grain, partly the Mahuya; but for four or five days in the month they eat the seed of Sakuya. In times of scarcity $\frac{5}{12}$ of their whole subsistence is derived from the Mahuya, $\frac{2}{12}$ from the Sakuya, $\frac{1}{12}$ from the Odail root, and $\frac{4}{12}$ from grain. A few other substitutes are used, as will be afterwards mentioned; but to no considerable extent. All these substitutes are very inferior to grain, and the people, feeding even on the Mahuya, which is the best, become weak and sickly. The fresh Mahuya flowers are boiled in a little water to dryness, and form a pulp, which is eaten cold with a little boiled pulse, if this can be procured. The dried flowers are boiled to dryness, and then beaten to a paste, which is eaten with some parched seed of Sesamum, if this can be afforded.

The Kend is one of the most common trees in the district, and has a very strong affinity to the Tupru of Mysore, but neither seems to have been described in such works as I possess. The fruit is eaten, and, when ripe, is said to be good; but it is generally brought green to market; and, to render it eatable, must be heated in a pot covered with embers. The tree flowers in June, and the fruit is not ripe until April. The common timber has the same qualities with that of Makar-Kend; but both, when allowed to grow large, produce a black heart, which is called Abnus (Ebenus). The Kumbhi of Mungger, and Kumbir of the southern woods, or Pelou of the *Hortus Malabaricus*, is pretty common. The cabinetmakers of Mungger employ it for boxes. It takes a polish, is of a mahogany colour, well veined, and is not very heavy. It does not resist damp, and splits with the sun; but, if kept dry, is pretty durable. Its fruit possesses a saponaceous quality. Its timber was formerly used for making the drums of the sepoy corps, and it is employed for wooden hoops. It is very flexible, and, on exposure to the weather, does not split.

The Kalamba Nembu of Mungger has oval notched leaves, generally blunt. The petioles are slightly winged. The fruit is oblong, but thicker towards the point, which is sharper than towards the stem, and is marked with many obtuse longi-

tudinal angles. It grows as large as the Jamiri, ripens in November, and has a fine acid juice. The Karna Nembu of Mungger has seldom any thorns, the leaves are generally long, egg-shaped, sharp pointed, and slightly notched. The petioles have a large wing. The fruit is as large as a citron, is shaped like a pear, but rather sharp at both ends, and is very rough. The juice is agreeably acid. It seems to come very near the *Limo taurinus* of Rumph. In the plant of Rumph, however, the juice is corrosive, and unfit for eating, which is by no means the case with ours; but Rumph's plant is in a state of nature, and ours is cultivated, which may account for this difference. The Naranggi of Mungger is the *Aurantium sinense minus* of Rumph (Asiatic Researches, vol. 2, page 113). It is a small sweet orange, the rind of which, when ripe, separates spontaneously from the succulent part. About the villages, a species of *Cedrella* is much esteemed by the cabinetmakers, and takes a fine polish. The flowers are used as a yellow dye.

The Galgal of Mallepoor is in spring a very beautiful plant, being covered all over with large yellow flowers, without leaves. It approaches very near to the genus, called *Stewartia* by botanists, but its seed is wrapt in a kind of cotton. Its wood is in no request. The sandal tree is found near some monuments of saints, at Bhagulpoor, and in the common dialect of the place is called by the same name exactly, which the English use. I am assured by a native workman of Mungger, that some years ago a tree of this kind grew near Pirpahar in that vicinity, and, having reached to about a span in diameter, was cut, and found to possess a very good quality. This is exactly the same tree with the sandal of Malabar, which by modern botanists has been called *Sirium myrtifolium*, although it no doubt is the tree which gives the most common and valuable sandal of commerce. The pomegranate is common. The apple-tree grows in a few gardens, and produces apples, little larger than a nutmeg, and not absolutely so bad as crabs. In the gardens of Europeans the peach is common, and there are a few in those of the natives. It by no means thrives so well as in Bengal. It is too late of ripening, so that the showers of spring usually rot one side, while the other is green.

The Khayer, or *Mimosa Catechu* of this district, exactly

resembles that which I saw in Ava, and differs in a few trifling particulars from the tree of Morang, which gives a similar drug. The wood is of no use, except as yielding this extract, and in this district the roots seem as much used as the stems. The number of trees is very great, especially in arid barren places, in which chiefly it seems to delight; but it is here very rare to find a tree of it so thick as the arm, which would seem to imply, that the quantity of Catechu prepared was very considerable. The Catechu made here is very inferior to that of Morang, owing partly to the slovenly manner in which it is prepared, and partly to a general practice of adulteration. The chips are boiled in small earthen pots, until the Catechu is extracted, and the decoction is then inspissated in a separate vessel, and poured thin on a bed of leaves, where it is allowed to dry. It is then beaten in a mortar with a little warm water, and formed into balls, during which operation, a kind of earth, called Makar Mati, afterwards mentioned, is generally added to about one-fourth of the whole weight. A little called Papri is made into small cakes, without adulteration. The people work from Kartik to Phalgun (middle of October to middle of March), but an interruption of two months at least arises from the rice harvest, so that each man may make 3 *mans* or 270 lbs., worth to him 6 rs., and to the exporter 18. The maker pays a rent of 4 anas a year, one-half for permission to cut Khayer, and one-half for permission to cut fire-wood. 1350 men make about 4000 *mans* of Catechu. The wood of the Babar is much sought after for carts, especially for the naves of wheels. The gum is sold by druggists.

The *Bauhinia purpurea* is a small tree of little use, but is exceedingly ornamental; the flowers before they expand, are used as a common vegetable. The *Butea frondosa* is very common in the woods on both sides of the Ganges, wherever the soil is rich and moist, without being liable to inundation. Its bark is beaten to a kind of oakum, which is used for caulking boats. Its timber is useless. In the woods it is reckoned the best tree for rearing the Lac insect.

The Satsal is reckoned the most valuable timber in the district, and is that chiefly employed by the cabinet makers of Mungger. The timber admits of a good polish, resembles very dark mahogany, and is durable. In the forests of this

district the Bhela or Semicarpus is abundant. It is supposed, that some people if they approach this tree, are liable to sores and humours; but the opinion is accompanied by several ridiculous circumstances, which render the whole suspicious. The fruit is sold in the markets as a medicine, and for staining linen. The timber is only applied to the most coarse purposes.

The mango has been extended beyond all reasonable bounds, so that the produce of a bigah (one-third of an acre) planted with these trees, and containing perhaps 20, is not in general estimated at more than 2 or 2½ rs. In general the fruit is very bad, and it is late of ripening, so that the season is short. Much of the ripe juice is preserved by drying it in the sun. This preserve is here called Amawat. Green mangoes are also preserved by cutting and drying them in the sun; this preserve is called Khatai. A few are made into Achar; when green they are split, stuffed with salt, mustard and aniseed, and then put in mustard-seed oil. The wood is in much request for packing-boxes, doors, chests, and other coarse work, but notwithstanding the numerous plantations, and that there are many old trees of great size, the wood can scarcely be procured, as the Zemindars, especially about Mungger, will not consent to their being cut. In this district mats are seldom, if ever, made of the stems of *Cyperi* or *Scirpi*.

The Chehar or Tehar is perhaps the greatest twining tree (*Funis silvestris*, Rumph.) of India, often exceeding a foot in diameter, and involving many trees in its grasp. It is a species of Bauhinia, of which I find no traces in authors. The legumes are roasted in the ashes, and the beans eaten. The leaves, being very large, serve as platters; and strips of the bark are used for ropes and bow-strings. The mountaineers eat wild yams (Dioscoreas); but such are not in use at Mungger.

The *Butea superba*, in spring is the greatest ornament of the forest. The seeds give an oil, which among the forests is used both for the lamp, and for anointing the body. They are parched before the oil is expressed. The Lac insect is sometimes reared on it. The bark is used for ropes, &c.

Minerals.—The country respecting its minerals, may be divided into five remarkable spaces. 1st. The Rajmahal

range of hills, extending from a little below Kahalgang to Udhawanala along the Ganges, and from thence south to the extremity of the district. 2nd. The Mungger range, beginning with a narrow point at that fortress, and stretching towards the south into the Ramgar district; but from its centre it sends towards the east a long chain, which is of the same nature, and reaches to Jathaurnath. The hills of Gidhaur are of exactly the same mineral appearances. 3rd. The space included between the two former ranges, and south from the above-mentioned chain, that is sent east from the Mungger hills. 4th. The space north from the same chain. 5th. The space on the north side of the Ganges, which consists entirely of earth and clay, and in this part of the report requires little or no attention; as it differs in nothing remarkable from the adjacent parts of Puraniya already described. I may only observe, that there, as well as in most low parts of the district, a black clay fit for the potter's wheel is abundant, and in many parts the vessels made of such are strong, and considered as preferable to those made of the reddish or yellowish clays, that are most commonly found in the higher parts of the district; this, however, I believe depends on its containing small siliceous pebbles; where it contains none of these, the black clay makes very brittle ware.

It is not to be imagined that these divisions are exactly defined by certain lines, which separate totally the productions most peculiar to each from those belonging to another division; such exactitude is never observed in the works of nature; but in the mineral productions of each division there is a great predominance of certain minerals, although detached portions of the minerals of another division are occasionally interspersed.

Minerals of the Rajmahal cluster of hills.—This is the only part in India where I have seen a great mass of stony matter disposed in horizontal strata; nor is it everywhere in these hills that this position can be traced; it is chiefly observable on their higher parts. There it may be in general traced, wherever any considerable excavations have been made, or wherever there are abrupt precipices. Such however are not common; for although the hills are steep, they are not broken by great rocks; and the stones by which their surface is covered, are generally small detached masses.

Towards the roots of the hills, again in many places the rocks are absolutely devoid of visible stratification.

The great mass of these hills consists of what appears to me to be the variety of Trap, called *Whinstone* in Turton's translation of the Systema Naturæ, (vol. 7, p. 127); although I am not clear, that it is not a compact lava, (vol. 7, p. 128), between which stones I know of no proper limit. It is found in detached masses on the bank of the river at Rajmahal and Sakarigali; but both there, and in most other places, no appearance of stratification can be observed. Its horizontal disposition may however be very clearly discerned at the iron mine near Partapoor, in the division of Fayezullahgunj, where it forms the horizontal floor and roof, between which the ore is contained.

Very nearly allied to the above is what is called hornblende in mass, which differs chiefly in being much softer, although it still retains a great degree of toughness, and resists the action of the air much longer. It takes a tolerable polish, although inferior to that of marble, with which however it is often confounded. On account of the ease, with which it is wrought, and of its durability, this stone is in great request among the natives. At Paingti it is found in rounded masses immersed in a soft substance, evidently consisting of the less durable parts of a rock of the same nature, now gone to decay. In some places this rotten mass has lost all traces of its origin, and has become a deep red soil, in which masses of the hornblende are found imbedded. Masses of several feet in diameter and quite sound might be procured; but the natives content themselves with smaller ones, which they cut into the stones on which they grind the materials for making curry, and many other substances. On the hill named Taruya, near Paingti, has been a quarry of this stone, from which great quantities have been taken, it is said during the Mogul government. The place is conveniently situated, and very fine masses might be procured for building, no part of the rock having as yet decayed.

The two stones hitherto described, whin and hornblende, were by Wallerius classed together and called hornstone (*Lapis corneus*), and both the arrangement and nomenclature seem excellent, as both stones possess great toughness without being very hard, and as their colour resembles that of a

black horn. Modern mineralogists, however, in the progress of their science, which seems both in arrangement and description to be retrograde, have applied the name hornstone to other minerals, which have little or no resemblance to horn, and which are flint in the mass or rock. At Sakarigali, close by the edge of the water in the winter, is a curious horizontal layer of this stone not above a foot wide, but exceedingly difficult to break. It is filled with the exuviæ of a fern. It is divided by fissures into rhomboidal masses, from 6 to 12 inches in diameter.

A substance, which naturalists include among the clays, but called Khari by the natives, is very generally diffused through these hills, and several quarries of it have been, and still are wrought. When perfect, it is a substance somewhat like chalk, but is not calcareous. Women in many parts eat it, when breeding, as in Bengal they eat baked clay, and some of it for this purpose is exported to Moorshedabad. Boys when taught to write, rub it with water into a white liquid, with which they form letters on a blackboard. Native painters and gilders cover with this liquid the wooden work, on which they are about to operate. The best Khari is white, and although little harder than chalk, seems to be formed of siliceous stones in a state of change. Among these hills I have found no specimens of the flinty hornstone, yet I think it probable, that formerly much has existed, for every where there abounds a kind of imperfect Khari, which to sight has every external appearance of the real kind, but is too hard for use, and in fact is in an intermediate state between the proper Khari and flinty hornstone. Farther in a piece of this imperfect Khari, which I found on the road between Sripoor and Majhuya, are evident traces of vegetable impressions, which serves to connect its origin with that of the hornstone of Sakarigati above mentioned. Still farther in some pieces of imperfect Khari, I can trace the gradations from that stone to a kind of granular quartzose concrete, very common in these hills. Although the best Khari is white, yet much of a proper softness, as well as of the hard and improper kind, consists of various parallel layers of different colours, sometimes plane, at others very curiously waved. The colours are white, red and dirty yellow.

On a hill called Kharipahar, the farthest south on the

range, now described, is by far the best quarry. It is covered by a horizontal stratum of stone about three feet thick, under which it extends to an unknown depth; but in their operations the people have not exceeded six or seven feet. It is disposed in vertical plates from one to three inches thick, and separated by an ochraceous matter, among which I observed traces of mosses. The plates run north and south, and are of various shades of white, but the whitest and softest alone are selected for market, and freed from ferruginous matter. This Khari seems to be what naturalists call a porcelain clay, and of very fine quality, and perhaps as ballast might be sent with advantage to Europe. This quarry has been long wrought; and although situated on a hill belonging to the southern tribe of Mountaineers, and cultivated by them, has been considered as the property of the Virbhum Rajas, and on the sale of their estate went, as a separate lot, to Lala Gourhari, who pays for it 29 rupees a year. He sometimes has wrought it on his own account, and sometimes has let it to a manager. Whoever works it, gives to the hill people, who quarry, 2½ Sers of rice for each ox-load of *Mans*, and this he sells at Moorshedabad for about 1½ r. He annually digs about 1000 *mans* (58$\frac{1}{10}$ s.w. a ser), each weighing rather more than 60 pounds.

About three miles farther north, on a hill called Porgang, is another quarry of Khari, which I did not see. When I was in the vicinity, in Dec. 1810, it had been only lately discovered, and for about six months, during which 500 *mans* had been procured. At Mansa Chandi, a small hill near Phutkipoor, was a mine of Khari, which had been dug from a kind of sloping gallery running through a curious argillaceous stone, that will be afterwards mentioned; but the deity of the hill, about 40 years ago, was supposed to have taken offence at the people prying into her secrets and the work was stopt.

On the hill called Gadai Tunggi at no great distance from the above, and belonging to the northern tribe of Mountaineers, is a fine quarry, now wrought. The hill forms the NE. corner of the range overlooking Rajmahal, and consists mostly of whin, but the surface in some places is covered with shaggy fragments, that appear to me to have undergone the action of fire. The Khari is only covered by red earth from 18 to

24 feet thick. Through this earth the workmen dig a sloping passage, open above, and perhaps four feet wide, until they reach the Khari, when they dig a gallery into this substance, and take out as much as is wanted. Every year this must be repeated; as in the rainy season the water fills up the passage, and brings down the roof. A merchant hires the hill people to work, and, on account of the risk, gives them four anas a day. The Khari here is softer, and more unctuous than at Kharipahar, and being mostly in layers of different colours, is chiefly used as a medicine. In fact it is what naturalists call Bole, or perhaps Lemnian clay; for in water it does not fall to powder. On one piece I saw somewhat like the appearance of a bivalve shell, but, if such, it was so much decayed, as to render its nature uncertain.

The last quarry, that I shall mention is on the hill called Modiram, which is a little south from Kahalgang, and forms the north-western extremity of the range, which I am now describing. This quarry is a porcelain clay, being of a less unctuous quality than the last; but on being put into water, it falls instantly to powder. It is not however so pure as that of Kharipahar, being less white; but its colour is an uniform pale ash, nor is it intermixed with ferruginous matter between the layers; and being close to the river, its price at Calcutta might be a trifle. It has been wrought in two places, pretty high up the hill. The stratum in each has been from three to four feet thick, perfectly horizontal, and extending into the hill for an unknown length. The roof and floor in both are imperfect harsh Khari. The natives dug into the quarry, without leaving pillars, to support the roof, until that fell. About three years ago, they went to the upper quarry, now wrought, and have made a large excavation, perhaps 20 feet each way, and they will continue to enlarge it, until the roof falls, when they will look for some other place. The leaving pillars to support the roof, is a mystery far beyond their present attainments in the art of mining; and, when mentioned, was received with numerous frivolous objections.

Very nearly allied to the above Khari, and frequently indeed forming alternate layers in the same mass, of the more imperfect kinds, is the strong substance called by the natives Geru, which differs only from Reddle in being harder. It has not been found in larger masses, and is in general so much

intermixed with matters of another colour, to which it firmly adheres, that it is never sought after in quarries. Small fragments, that are found scattered in the beds of torrents, and which, in the progress of decay have been separated from the other matters, with which they were united, are sometimes collected near Kharipahar, and used as a paint, for which they seem well fitted.

I have already said, that some of these Kharis probably owe their origin to sand-stones, and of these there are in this district a great many. Some are horizontal, and of these some seem to be composed of the debris of siliceous rocks united together, partly without any visible intermediate cement, as on the ascent to Kharipahar, and partly by a cementing matter, in which little masses of quartz are thickly interspersed, as the stratum, which covers the quarry of Khari on the same hill: others again seem to be the mere sand of the river united by some unknown process of nature, as at low water mark under the hill at Paingti. In other sand-stones however there is no appearance of stratification, horizontal or vertical; and such seem to me to be granitic rocks in a state of decay. The various stages may be traced at Patharghat, under the temple of Bateswar, and the most complete specimen may be observed on the Pirpahar, which is a few miles above Rajmahal.

Sand-stones in many parts of the world form the best material for building; but in this district, so far as can be judged, from, what appears on the surface, they are of little or no use. The only one, that seems to have been wrought, is on the face of the hill above Patharghat, where the edge of a horizontal stratum of concrete siliceous stone has been smoothed, and carved with numerous figures, probably of considerable antiquity. The stone is certainly very ill fitted for sculpture; but seems to resist the weather, and probably would answer well in building. A stone of a similar nature, but much more perfect, is found on the summit of Kangreswarikatok, which I take to be the crater of an extinguished volcano; but its situation is too distant from water carriage to admit of its being used. Besides the granites and vertical strata in a state of decay, I must mention, that under the northern and southern extremities of this range, at Patharghata and Kharipahar, there is large grained grey granite

with blackmicaceous or shorlaceous spots. At Patharghata the rock is washed by the Ganges, and fine masses might no doubt be procured. In the very southern extremity of the division, on the Duyarka river, is a fine rock of solid granitel consisting of black shorl with many small specks of white quartz. It may be doubted however, whether any of the primitive rocks form a part of this eastern range, as they are found just on its extremities, and may belong to adjacent mineral structures.

I here observed several breccias, with an argillaceous cement, containing rounded nodules of different kinds. One of these was in the bottom of the cavity in Kangreswarikatok, a place, which I take to have been the crater of a volcano. Another was on the hills between Phutkipoor and Mansa Chandi, which consists chiefly of what appears evidently to me to be a slaggy matter, that has undergone the action of fire; but, before I proceed to treat further on such slags, I must observe, that south from Mansa Chandi, at Jajpoor on the borders of Virbhum and Murshedabad, there is a hill, which consists chiefly of a clay readily cut with a knife; but which on exposure to air becomes somewhat hard, and is evidently of the same nature with the brickstone of Malabar, which I have described in my account of Mysore. It is however vastly inferior in quality. This clay has a very strong resemblance to the slaggy stone of Mansa Chandi, and some parts of it, that have hardened into stone, are scarcely distinguishable, except by wanting the slaggy appearance. They must however be considered as a kind of breccia, as they contain certain ferruginous nodules in an argillaceous cement. To return to the slaggy matter, which I consider as having undergone the action of volcanic fire; I cannot say, that I saw it any where, very decidedly, forming great masses like currents of lava; but on a great many places, I found it in detached blocks lying on the surface; such as on Pirpahar near Rajmahal, on Chaundipahar, on the road between Sripoor and Majhurya, and on different parts of Kangreswarikatok, which I consider as the old crater. On Mansa Chandi and Gadai Tunggi, I am inclined to think, that the masses were united into solid rocks; but, without digging, that could not be ascertained. On the edge of what I took to be the crater of Kangreswarikatok, I found a stone, which appeared to me

to be volcanic sand conglutinated; and the resemblance between this stone, and the siliceous concrete, that is often incumbent on the Khari, is very strong. This, together with the circumstance of the vein of Khari contained in the slag of Mansa Chandi, seem to imply an extension of the operations of fire over the whole of this mineral division of the district.

I have said, that Kangreswarikatok, on the western extremity of this range towards Parsanda, appears to me to have been the crater of a volcano. It is a conical hill about 300 feet in perpendicular height, and very steep on all sides. On reaching the summit you find, that it consists of a great cavity surrounded by a thin ledge, and descending to very near the level of the plain. The ledge now is of unequal heights, having in some places given way, especially towards the east, where a gap, about 30 yards wide at the bottom, gives access from the outer plain with very little ascent, and allows the water from the cavity to escape. Towards the summit the inner surface of the ledge consists of abrupt rocks, but the bottom is filled with the debris of the portions of the ledge, that have fallen. Much slaggy matter is to be found both on the outside of the hill, and in the bottom of the cavity.

I was informed by Isfundiyar Khan, a fine young man, assistant to the Suzawul, who manages the hill tribes, that about five years ago he heard of a smoke, that isued from a hill named Chapar Bheta, about seven coss SE. from Karariya. He visited the place, which was not hollow, and consisted, as usual of earth mixed with a great many fragments of stone. In the day it was not luminous; but a thin smoke issued continually from a space about 8 or 10 cubits in diameter. He heard, that in the night it was luminous, but he did not see it in that state. On throwing wood upon the hot place, in a few minutes it took fire. These appearances continued for about three years, and then stopped.

In this range of hills I saw no traces of pyrites, coal, nor other inflammable substance. I have however been informed, that at Motijharna, on the hills near Sakarigali, there is a stratum of coal; but this information I also received long after I had been in the vicinity, and from a person, on the accuracy of whose accounts, I had several opportunities of knowing, that no reliance could be placed. Besides the slaggy detached

masses, that are scattered over the surface of this mineral range, there are two other classes of sporadic bodies, that are very common, not on the higher hills, so far as I saw, but at their roots, or on very low hills, or very often on the plains, that are interposed.

The first of these sporadic masses, that I shall mention, are siliceous, and are usually found scattered over surfaces, intermingled with fragments of whin, slag and imperfect Khari, and I suspect owe their origin to these bodies under a fusing heat. I found them at the bottom of Gadai, Tunggi, and Chaundi, near the iron mine of Partapoor, but above all on the road from Sripoor to Majhua, for almost the whole of its extent, which is about 14 miles, just in the centre of the northern part of this mineral range. Many transitions, or intermediate states, between the three substances, to which I have above alluded, and the more perfect siliceous nodules may, I think, be observed. When perfect, they are more or less diaphanous, or even transparent, and many of them are crystallized. Some of their substances are uniform, others are in various coloured layers, but in general without the smallest interruption of continuity. These layers are sometimes parallel, sometimes concentric, and several nodules with concentric layers are often included in one mass. Many of the masses are covered with stellated pits, as if they had formerly been corals; but the crystallized internal structure of some, that are thus pitted on the surface, seems to prove, that the appearance is not owing to the impression of animal exuviæ. The crystals are very various. In general they are clusters covering the surface; but in others they are confined between parallel plates; while in others they shoot from the inner surface of a smooth cylinder, and fill its cavity; finally in others they form through the substance of the nodule very curious angular cavities.

The other kind of sporadic masses, scattered on the surface of this mineral tract, is calcareous, and consists of nodules called Ghanggat. In some places these nodules are small, lie on the surface, so as to cover it entirely, and prevent vegetation. In others they are imbedded at some depth in a thick red soil, through which they are scattered at various depths. Their surface is white, and very irregular, and their shape is very various, often branching out like corals. They

are exceedingly hard, and within of a compact structure, and are entirely similar to the calcareous nodules found in the south of India, which I have described in my account of Mysore. In the interior of the district they are generally found on the surface; but towards the banks of the Ganges are most usually immersed in the earth, and in both are used for making lime; but it is of an inferior quality, and is not white nor fit for the outside plaster, with which walls are encrusted; but answers well enough for mortar to connect the bricks. On the hills of Paingti and Sakarigali considerable quantities are burned.

This calcareous matter seems to me to be a kind of tufa, and to have been once in a soft state. On these detached nodules indeed no impressions can be traced, and there is strong reason to think that they are now forming, as it is alleged by the workmen, that the same earth from which they have been taken, after a lapse of some years, is found to contain new ones. But farther, the very same calcareous substance, of which these nodules consists, is found in very large solid masses, in which it seems to have flowed over the surface of the stony matter, and to have involved many detached portions, or to have lodged on the surface of a rock, into the crevices and pores of which it has penetrated, so that the two masses cohere. The external surface of such masses is as unequal as of that of the nodules, and resembles that of some corals.

At Paingti two very distinct kinds of this tufa in mass may be traced. One exactly resembles the stone of Manihari described in my account of Puraniya, and which, when I wrote that, I considered as a porphyry changed into calcareous matter; and in fact it so exactly resembles the argillaceous breccia found in the hills south-west from Phutkipoor, that I have very little doubt of its having been once of a similar nature. In this are involved many masses of the hornblende in mass, which I have mentioned as constituting the greater part of the hills near Paingti. The masses of hornblende are of various sizes, from that of an apple to that of the head, and have been rounded by the progress of decay, before involved in the calcareous mass. The other kind of solid calcareous mass found at Paingti consists of the common tufa, involving pebbles of various natures, but mostly of the

Geru, or indurated reddle, that I have formerly mentioned. At Pathargbat, again the same calcareous substance has flowed over a stratum of the red concrete sandy matter mentioned as found there, and entering its crevices, has united with it into one mass.

This calcareous matter at Paingti has also formed a very different substance from the above-mentioned tufa, or at least has in decay suffered a great change of appearance, forming a friable granular substance; but it retains traces to show that it has formerly resembled that, which I suppose to have been changed from the argillaceous breccia. This is a very considerable mass, into which the cave under the old Mudursah, described in the topography, has been dug.

In this portion of the district the quantity of metallic matter in the form of ore is not very considerable, and it is iron alone that has been discovered. The richest mines of Virbhum are close adjacent to its south-east side, and probably are connected with it in mineral affinity, for mines were formerly wrought at Virkati in Suttangunj, and at Kalidaspoor in Ambar, both on the eastern side of this division; but these have been abandoned, and are now entirely choked, so as to be inaccessible. The former were situated in a stratum strongly resembling the indurated clay of Jaypoor above-mentioned; and at Jaypoor I found plates of iron ore, forming a mass contiguous to that clay, and separated from each other by argillaceous matter strongly impregnated with iron. They are not attracted by the magnet, have a somewhat conchoidal fracture, very fine compact grain, no lustre, a very dark reddish brown colour, and red streak.

The finest iron mine in the district is on the hill named Ramkol, a little south from Pantapoor, which I have already had frequently occasion to mention; but this also has been abandoned, from the slothfulness of the people. The mine is a horizontal stratum, some way up the hill, running to an unknown extent between two solid masses of whin or trap, which compose the hill. The stratum of ore was said to have been about seven feet perpendicular thickness; but, having been wrought exactly in the same manner as the quarry of Khari on Modiram, the roof has fallen, and the exact dimensions cannot be ascertained. The whin immediately adjacent to the ore is decayed, or as the natives not unaptly say, is

dead, which rendered the precaution of pillars still more necessary. The ore is of two natures. In the upper part of the stratum it is softest as in a state of decay, is called Laliya, and is attracted by the magnet. In the under part it is harder, is called Kariya, and is not attracted. This is said to be the best ore, although it would appear to be specifically lighter, and should therefore contain least metal. Both are black with a common lustre, and contain small grains and dots, which to me give an appearance of its having undergone fusion. This is probably the only mine in the district which Europeans would consider worth working.

In this part of the district, as well as in the third of its mineral divisions, there is a very common appearance, which I think may possibly arise from ferruginous vapours issuing from the earth. In certain places all the fragments of stone and pebbles, that are lying on the surface of the earth, are covered with a kind of brownish enamel, quite thin and superficial. The stones thus covered are all of different kinds, nor does any one in the same space seem to escape, while similar stones at a little distance, are in no manner affected.

In September 1810, at Masdharipahar, about 10 coss east from Kalikapoor, in the territory of the northern tribe of mountaineers, a considerable space of the surface of the hill, said to have been about 40 yards each way sunk downwards, leaving a cavity 10 or 12 cubits deep. The cavity at first was filled with water, but soon dried. The soil was a red clay mixed with many fragments of stone. The intermediate country was so inaccessible, that I could not find means to visit this curiosity.

Minerals of the western range of hills.—In the former division I have said, that the most predominant rock is of the nature of whin or trap, and quartz is there rather an uncommon ingredient, at least in masses of a great size; but here a large proportion is quartz, and a still greater kind of rude jasper, or petrosilex, called hornstone by later mineralogists; and these two siliceous stones run so into one another by various gradations, that it is difficult, if not impossible to say, where the one begins, and the other ends.

It is, I imagine, difficult to say, that these hills are in any degree stratified, although they sometimes assume an appearance of that form. In general the siliceous rocks are inter-

sected by a vast number of fissures horizontal and vertical, cutting them into masses approaching to the form of cubes and parallelopepids; and, when they are exposed to the weather in a state of decay, these masses divide into layers somewhat like those of wood, especially if the mass is exposed on an abrupt vertical surface; but if the surface exposed is horizontal, and level with the earth, the layers more resemble slate. In some places the vertical fissures, extending the whole depth of a perpendicular rock, give somewhat the appearance of basaltic columns, which may be especially observed in the magnificent recess called Marak, about 15 or 16 miles southerly from Mungger; but in fact, so far as I observed, there is nothing really columnar in the district. These hills are particularly distinguished from those of Rajmahal by their rugged nature, vast masses of naked rock projecting everywhere on the surface, and forming precipices of great height and abruptness.

The form which the greater part of this siliceous stone assumes, is that which I have called rude jasper, or petrosilex, the hornstone of modern writers, for although these stones are considered as different, yet in the specific characters which are given, there is, as often happens, no real difference. If we take the character of Wallerius, that petrosilex is found only in veins, or detached masses immersed in rocks, and that jasper forms whole rocks, then undoubtedly our rock is a jasper; but it in general departs very far from the appearance of what is usually called such. It is a rock striking fire copiously with steel, with a large conchoidal fracture, forming when broken sharp edges like a flint, and its fracture has a rough, earthy appearance, being composed of very fine grains. In most parts it is of different shades of white or ash colour; but in others it inclines to livid, and still more often to red, but it is seldom that the redness extends over a whole rock, it is generally confined to layers alternating with others that are parallel and white, or it is confined to spots or flakes on a white ground. Such more resemble the stones commonly called jasper; but whether it could be wrought, or take a polish, I cannot say, having been unable to procure a workman.

This jasper or hornstone sometimes has larger grains, so that each is very distinguishable to the naked eye, and then

it approaches near some of the quartz, which becomes granular; but there are other stones, which are a kind of intermediate between the two species, where a mealy or arid quartz approaches very near to our jasper, and there are still others which would seem to be composed of small portions of the two stones huddled together, and firmly united to form, what naturalists call an aggregate, as will be afterwards mentioned.

The quartz, in its most perfect form, consists of a substance approaching to glass, the conchoidal appearances on which, when broken, are very minute, and are known to differ from the former by every one who has taken the pains to compare the appearance of a piece of broken glass with that of a flint. The quartz, of which also there are many rocks, is sometimes almost pellucid like glass, sometimes white, sometimes red, or stained with red just like the jasper, and sometimes livid. Most of it has a fat unctuous appearance; but some of it approaching to the jasper, has dry earthy-looking particles; but, when broken, wants the large convexities, that distinguish that stone. Again, other portions consist of small grains, united together, and some of these have the fat appearance, while others in the same stone are mealy, and thus form what the mineralogists call an aggregate. The quartz again is very often mixed with extraneous matter, and especially with what is called mica, which shines like gold or silver. When this is in very small quantities, thinly scattered through the body of the quartz, the rock may be considered as simple; and among the whole quartz of this division very few masses of any size could be found, in which a few specks of mica might not be shown; but, when the stone consists of some particles of quartz and others of mica heaped together, and closely united, these particles form what is called an aggregate, and I shall proceed to treat of these, after mentioning, that mere quartz is so full of fissures that it does not cut for building. The fort of Gidhaur is indeed, in a great measure, built of it, or of the rude jasper from the adjacent hill; but the masses have not been squared by the mason; the parallelopepids, as rudely formed by nature, have been employed.

To return to the aggregate stones, both what I have called granular quartz, and granular jasper petrosilex or hornstone,

may be considered as an aggregate; although it is usual to confine that term to rocks, in which more than one kind of matter has been aggregated. When the stone is compounded of glassy quartz, intermixed with mealy quartz or hornstone, which in such cases I do not know how to distinguish, the term will be more readily admitted. In this part of the district there are many such rocks, and they are sometimes coloured in the same manner as the jasper. In some cases the mass consists of thin alternate layers of this aggregate, and of simple fat quartz, as on the detached hill called Khejuri, a little south from Tarapoor.

I have already mentioned, that large masses of quartz, which do not contain any mica, are seldom found; but, when the mica and quartz are, as it were, intimately combined in minute parts placed parallel to each other, they form a stone which has been called schistose mica, and on the hill Rauta, a part of the transverse chain reaching to Jathaurnath, may be found stones in all the intermediate stages from pure granular quartz to the perfect schistose mica. A little east from Rauta, near a hill called Barai, this last substance is found in a considerable mass, forming a small hill called Barapahar, and is wrought for making the stones of hand-mills. It is by the natives called the Dudi stone, and is divided into irregular trapezoidal flags, separated from each other, first by vertical fissures, which run east and west, at from two to four feet from each other; secondly, by other vertical fissures which cross the former at right angles, generally at greater distances; and finally by horizontal fissures, at the distance of from six inches to one foot; but these flags are so much shattered by subordinate fissures, that solid masses, fit even for making the stone of a handmill, cannot be every where procured. This stone cuts readily with a chisel, and does not readily tarnish in the air. It has a pale greenish hue from the mica, perhaps approaching somewhat to the nature of chlorite. In some places it is stained red. The same kind of stone is found at Tahuyar Nagar Ghat, in the same vicinity, but it is not wrought.

Where the aggregate consists of two distinct matters, mixed together without any apparent order, it is usually called a granitel, and some such are found on the hill Rauta above mentioned, especially one seemingly composed of quartz

and chlorite; one composed of black very heavy shorl, or perhaps micaceous iron ore, with small spots of quartz; and finally one composed of white quartz, with a smaller proportion of the same black matter. These latter aggregates may be perhaps considered as adventitious in this division of the minerals, as they are on the boundary of a territory abounding in such, and quite different from the general mass of which I am now treating.

The only one which I consider as properly belonging to this mineral range, is a stone composing the small hill called the Kamuya (working place) of Laheta, 15 or 16 miles southerly from Mungger. It has been long wrought for the stones of hand-mills. The quarry is on the southern declivity of the hill, runs nearly east and west, and has been opened in different places for a considerable extent. The excavations are now pretty large. One of them, the largest that I saw, might be 200 feet long, 20 wide, and 12 deep; but so irregularly and unskilfully wrought, and so clogged with rubbish, that the proper extent of good stone is not readily determinable; and this good stone is bounded on each side by kinds, which in the eye of the mineralogist, scarcely differ; but which the workmen reject as too hard and difficult to work. The workmen take a piece suitable for their purpose, wherever they can find it most easily, cut it into shape on the spot, and then look for another, until the whole quarry is so filled with rubbish that no more mill-stones are procurable. Pioneers are then employed to clear the quarry. This is also choked with large masses, which the workmen avoid as much as possible, as being troublesome to break. Fine stones for building might therefore be readily procured, and it seems to be an excellent material, which cuts readily with a chisel. It is an uniform aggregate, without a tendency to schistose structure, and consists of grains of glassy quartz, united by a greenish grey substance, which has no lustre, and might be perhaps considered as of the nature of powdery quartz or hornstone; but its colour is against that supposition, and in many places, I think, I can trace the foliated appearance of mica. It contains some small red spots, which seem to me to have arisen from the iron of the mica when it is decayed, having collected in the form of ochre. If wanted for building, the part of the stone above

the quarry, which is rejected by the workmen, as wanting fissures to facilitate its division, and by them called Korra, would be found the best, but its distance from the river is perhaps too great.

The siliceous matter of this division of minerals also has some tendency to form the kinds of clay called Khari, of which there is a considerable quarry on a hill south-west from the hot springs of Rishi Kunda, but which I could not visit. It is of an uniform bluish grey colour, but becomes white when powdered. It has a soft greasy feel, does not readily fall into powder when put in water, nor does it adhere to the tongue. It is chiefly used for writing and painting. From the unctuous nature of its feel, this might be suspected to belong to a class of minerals, that will be soon mentioned; but I think, that on the banks of the Mon, near the hot springs of Bhimbandh, I found the petrosilex in a state of decay, advancing towards the formation of such a substance; and at Amjhor Ghat, nine or ten miles from Mungger, I saw a red grained siliceous aggregate, evidently in part changed into a kind of Khari, called there Parori Mati, which is used by pregnant women as a medicine.

But farther, a Khari used in writing, is found on a hill called Geruya. It is a stratum of an unctuous substance, which cuts smooth with the knife; and although on the face of an arid hill, retains some moisture, even in March. When dried, it adheres to the tongue, and instantly, on being put into water, falls to powder. It is of a fine white colour, veined and spotted like the siliceous rocks, between which it is found. These rocks have a strong resemblance to the argillaceous breccia, mentioned in my account of the first division of minerals, as being found near Phutkipoor; but its cement is most evidently siliceous, and it contains veins and nodules of quartz, as well as nodules of other substances. The whole has more or less of a slaggy appearance, and some of it has, in my opinion, most clearly undergone the action of fire. There is, however, nothing about the hill that resembles a crater, and it is quite sporadic, in the midst of the third mineral division, near Jamdaha, on the left bank of the Chandan. I am however induced to consider it as a detached portion of the second class of minerals, from its resemblance to the hill named Katauna. This hill Katauna

is situated a little south from Thanah Mallepoor, in the centre of this mineral division, although it belongs to a detached portion of the judicial district of Ramgar, which is surrounded by Bhagulpoor. There is no Khari on Katauna, nor has it, so far as I saw, any appearance of a crater; but its stone is exactly of the same nature with that on Geruya. Notwithstanding the copious warm springs which it contains, these are the only traces of volcanic fire that I have observed in this mineral division.

The soft matter called Khari, formed of the siliceous rocks hitherto mentioned, leads me to speak of a softer class of stones, which occupies much of this mineral division, although by no means so much as in the first described portion of the district; nor did I here observe any whin; they are all of a softer nature, although many of them are abundantly tough, and difficult to break with a hammer. Commencing a little south from Mungger, and going south almost to the parallel of Kharakpoor, and then turning west to the banks of the Kiyul river, is a long uninterrupted hill. On both sides it is siliceous, and in one place where I crossed it, the siliceous matter is no where interrupted; but in every other place which I had occasion to observe, the centre of the hill seems to consist of a much softer material.

One of the best of these stones, is a very fine grained hornblende in mass, containing small crystals of the same matter, and of a greyish black colour. There is a good quarry of it near Masumgunj, where a few workmen have been long employed in cutting blocks, from whence images of Siva are finished at Mungger, and sent all over Bengal. Very nearly allied to the above at Amjhor-ghat, a very little south from the above-mentioned quarry, I saw large rocks of a fine silky lustre, and consisting of parallel thin layers of different shades of grey, but having nothing schistose in their texture. I found detached blocks of the same at Amrakol, south-west some 10 or 12 miles.

At the same place I found detached masses of a stone, which differs only from the former in its layers being of different shades of red and white. I nowhere saw the solid rock of this stone; but it is probable, that there is such in some place of easy access; as two of the gates at Mungger, have been in a great measure faced with it, and have been orna-

mented with many foliages cut in relievo. It does not take a finer polish than the hornblende, and does not resist the action of the air nearly so well; but from its colours it is more beautiful, and fit for buildings. In this stone had been imbedded many small cubical masses, but they were in such a state of decay, that I can form no conjecture concerning their nature.

By far the greater part of the stones of this class, that I saw, were, however, schistose or slaty, but none of them, at least by the native artists, that I tried, could be split sufficiently thin for roofing slates. Some of them are, perhaps, argillites, but the greater part is of schistose hornblende. The one that is in the thinnest plates, least silky, and freest from crystalisations, and that therefore is the nearest an argillaceous slate, has somewhat of a bluish hue, but in general they are black, or intensely dark grey, with a silky lustre, and sometimes of a fibrous as well as of a slaty texture; and most of them contain small plates, I presume, of hornblende. They take an imperfect polish; and, when rubbed by a pencil of the same substance, leave a grey streak, so that they might serve for keeping accompts. In many parts they are wrought by the natives, who form platters of them; or make slabs, with which they lay floors. In general the workmen content themselves with taking fragments, that have been separated from the rocks by the streams of mountain torrents, but in some places they have taken the pains to procure a smooth surface, and split masses from it, as required. In some places adjacent to these proper strata of slate, I observed schistose matter in decay, which appeared to me as a kind of transition between the slate and the adjacent siliceous rocks; for it was more harsh than the proper slate, and in some places showed a tendency to the conchoidal fracture. In some places these slates contain pyrites, but not in great quantity.

Very nearly allied to these schistose rocks are others of a similar colour, and silky lustre; but their structure is not at all slaty, and consists of a number of parallel fibres, strongly conglutinated. These are what I presume some naturalists call unripe asbestos. In some places it is disposed in thin parallel layers alternating with white quartz. It is not applied to use. At Kaha, on the Mon river, I observed a bed of a

black talcose matter, with a silky lustre; and, except where the river had laid it bare, enclosed on every side by siliceous rock. Mica, which serves as a substitute for glass, in its shining sppearance is nearly allied to the above; and, as I have mentioned, is very generally diffused through the masses of quartz. In some places I found it abundantly transparent; but the plates were too small for use. Near Ghoramara, however, I learned that there was a place called Abarak, the name which the natives give to this substance; and in passing it, some of my followers found pieces tolerably large, which, with the addition of the name, induces me to think that the substance is procured from thence, although this was denied by the natives. The only stones of this portion of the district that remain to be mentioned, are the calcareous. The detached calcareous nodules called Ghanggat, and mentioned in the former division of minerals, are in this also very common, and need not be again described. The calcareous matter in mass is of two kinds, both very different from that of the first division. One called Leruya, is on the border of the Kamgar district, in the channel of the Ulayi river, and is said to be a small rock; but I did not see the place, nor can I judge of the extent of calcareous matter. It is a white marble, with small crystalisations confusedly heaped together, and intermixed with a little yellowish green mica, so that it must be considered as an aggregate. It takes a polish; but whether large blocks could be procured I do not know. The other calcareous matter in mass is called Asurhar, or Giant's bones. The greatest quantity is found at a place, in the centre of the hills, called Asurni, or the female giant. As the lime, produced from this substance, is whiter and better than that made from the nodules, a great part has been removed. It occupied a space on the surface of the declivity of a hill; about 40 or 50 yards in length; and from the bottom of the hill extended upwards from 10 to 40 yards, and seems to have formed a crust from 2 to 3 feet thick, covered by a thin soil filled with loose masses of stone. It has evidently been fluid, or, at least, gradually deposited from water, as it has involved many fragments of stone, some earthy matter, and a few univalve shells, of a species with which I am not acquainted, and cannot therefore say whether they are a marine

or land production.* The masses of stone that have been involved, vary from the size of the head to that of a walnut, and the Asurhar, or calcareous tufa, does not adhere very firmly to them, so that in breaking, the mass being very hard, these nodules are generally shaken out. Near the quarry I saw no rock; but all the fragments involved, and those under the calcareous matter are of a dark-coloured siliceous matter. In this place I saw appearances that in some measure justify the native name, for one piece of the Asurhar contained what had very much the appearance of a flat bone, with a process projecting at one end. I also observed a curious impression, a semicylinder about 3 inches in diameter, and 18 inches long, not quite straight, and exposed to view, as if, by breaking the rock, the other half of the cylinder had been removed. The surface of the cavity was wrinkled with transverse folds, like the inside of an intestine; but may have possibly been the bark of a tree, although I have seen no bark with such wrinkles. I rather suppose, that this has been the impression of some marine animal. The greater part of this Asurhar, as I have said, has been burned by Mr. Christian, a Polish merchant of Mungger, who, I am told, owing to the expense of carriage, did not find it advantageous. His overseer gave me a piece of it crystalized, which differs in some respect from any calcareous spar that I have seen. I myself found no crystalized matter in any of the Asurhar. This substance is also found close adjoining to the hot sources of the Angjana river, and by the natives has been wrought to a trifling extent. It is in a stratum about a foot thick, lying on loose siliceous stones, to which it adheres, and is covered by about a foot of soil, mixed with stones. So far as I saw, it contains no animal exuviæ. On the stones, through which the hot water issues, both at the sources of the Angjana and at Bhimbandh, there adheres a tophaceous matter, so like this Asurhar, that I at first sight concluded it to be the same; but on trial I found that it does not effervesce with the nitric or muriatic acids, and is probably of a siliceous nature.

I have already mentioned the pyrites found in the slate, and they seem to be martial, but the quantity is very small. Among this class of minerals, the only iron mines of which I

* I have since found these shells in the rivers of Gya.

heard are in the ridge, which extends east to Jathaurnath; and as they are on the borders of the third division, which abounds in similar mines, I suspect that they in fact belong to this division, and one description may serve for both.

Minerals of the southern central division of the district.—This division, as I have said, contains in its centre one detached hill, Geruya, of a nature which seems to belong to the class last described; but as the great predominant features of that division were hornstone, or quartz, and stones approaching to hornblende in their nature, so in the division which I am now about to describe, the grand predominant feature consists of aggregate rocks, composed of felspar, or shorl, intermixed with quartz, and sometimes with mica; nor in the whole, did I see one rock of hornblende, either in mass or schistose, nor any one even approaching to these in nature. This division also abounds in iron mines, and what I have called shorl may, I suspect, in many cases, be rather what is called black micaceous ore, and its separation from the other ingredients of the compound rocks may give rise to the iron mines.

Although these aggregates, containing felspar or shorlaceous matter, are the great component parts of the division, quartz is also very common, not only forming parts of the aggregate, but also forming alternate parallel layers in the same rock, and even whole strata. I no where observed any thing like hornstone, or rude jasper, except on the hills, by which the whole civil district is skirted towards Virbhum. I crossed these only in one place, between Dumka and Chandrapur, and therefore cannot speak with precision on the subject. There, however, although the greater part of the rocks were granitic, I found a granular reddish hornstone, exactly resembling many in the second division; and I suspect that a second long chain of hornstone projects from the east side of the rocks of that division, and passes by Baidyanath and Tiyur, in Virbhum, to the hill in question.

In the well-defined parts of this third division, the rocks seldom rise into bold broken precipices, although in a great many parts they come to the surface; and in the channels of torrents have generally been laid bare. Their internal structure cannot, however, be so easily traced, as that of the second division, but still it may readily be perceived that it is strati-

fied, for in some places I traced the same species of rock for a great way in one direction, while in the space of a few miles, crossing that direction at right angles, I observed a great number of different kinds, some of which reached a considerable way, while others could be traced in only one place. This implies that the strata are vertical, and that some of them are very wide, while others are narrow. The general direction of the strata seemed to run easterly and westerly.

In some of these strata the component parts were pretty uniformly scattered, thus forming granites and granitels, according as they contained 3 or only 2 ingredients; but in by far the greater number certain plates or flakes, as it were, contained a greater proportion of one ingredient, and certain portions a greater share of the other, forming thus what by some is called Gneiss. The length of these plates is always disposed parallel to the general direction of the stratum, and the edges are vertical, or nearly so. There were also other stones, in which the component matters were disposed in what may be called striæ; that is, a great proportion of one of its component parts run horizontally through the others in lines parallel to each other, and to the direction of the stratum. Such stones have also been included under the name of gneiss.

In many of these stones may be occasionally found vertical layers of white fat quartz, running parallel to the stratum, and entirely separating one part of the aggregated matter from the other, without producing the smallest interruption of substance; nor is the stone more easily broken there than any where else. In these stones, when entire, there is nothing like a schistose, or striated fracture; but in a state of decay, if exposed to the weather in certain situations, especially so that the rain may lodge on the surface, the stone gradually splits into thin plates like slate, and this seems to happen as readily to pure quartz, or to perfect granites and granitels, as to the gneiss. In other cases again, especially where blocks have been detached, the stone decays concentrically, and, of course, losing its angles first, becomes a rounded mass. As none of these stones are applied to use, and are too far removed from the river to be thought of for carriage to a distance, I need not enter into further particulars; I have only to mention, that in Lakardewani, some of them, in a state of

decay, form what is called Makar Mati, and consist of grains of white quartz, mixed with a white powder, which appears to me to be the felspar and mica reduced to one powdery substance. This is washed from the quartz, and makes a white-wash for the walls of the houses, which, were it more generally used, would add much to the appearance of the country. It is most commonly found in iron mines, and its whiteness seems to be owing to the abstraction of the ferruginous particles, when these united in the form of ore.

It must be observed that in the decomposition of these aggregates the quartz is the part which resists destruction by far the longest, although it subdivides by numerous rents in all directions until it is reduced to sand. In many parts of this division the surface is covered with such sand intermixed with fragments of half decayed granite and masses of quartz from veins not yet reduced to sand or gravel, while the felspar has been totally, and the mica has in a great part, been washed away. Proper mica is indeed very indestructible, and broken into small portions remains for ages intermixed with the quartz in sand, but the black shorlaceous matter of this division seems to yield more readily than even the felspar. Here also there are two kinds of calcareous tufa, the Ghanggat and Asurhar. The former is exceedingly common, generally in small nodules scattered on the surface. The Asurhar, so far as I could learn, is found only at one place, the fork at the junction of the Tapsitari with the Kurar, which is near Jamadha. It exactly enough resembles that of the source of the Angjana, and is covered by a little soil; but it is found on a level, and is intermixed with quartz, among nodules of which it has been deposited. Although it has been occasionally wrought, the depth of the stratum has never been ascertained, and the natives allege that the lower down that it has been dug, it has been found to contain less and less heterogeneous matter. I saw no traces of animal exuviæ, but I had an opportunity of seeing so little surface exposed, that it may very likely contain many.

In some lands disputed between Kadar Ali and his former vassal Rupnarayan, and situated near the five hills (Pangch Pahar), I was told that a mine of lead had been discovered, and that this had added much to the bitterness with which the dispute was agitated. The mine was said to have been

discovered by the priest of a village god, a man of very low caste (Mar). He conducted me to the spot and showed me a metallic vein, but I have heard it since alleged that I was intentionally conducted to a wrong place, and that both parties agreed to conceal the real mine; although in my tent even, I could not prevent the agents of the two chiefs from squabbling and worrying each other. This violence may however have been mere affectation, and what I saw certainly was not an object worth dispute, but the pertinacity with which the natives adhere to disputes concerning trifles is very great. I cannot therefore say whether or not I was shown the proper mine, I can only describe what I did see. In the first place it must be remarked that the ore is not that of lead, but the foliated sulphuret of antimony, which the natives call sorma. The priest showed me where he had dug an irregular trench, running from east to west, about 12 feet long, from two to four feet wide, and from one to two feet deep. In this space he said that he had found three ox-loads of the ore in masses from the size of a filbert to that of the fist, and on finding only small bits he had desisted from digging. He said that he found it intermixed with mouldering stone, but whether in a continued vein or in scattered fragments I could not understand. The ore he considered as lead, and had sold it as such to a merchant, who would no doubt sell it to the great, who stain their eyes with this substance powdered. The Gangue, or stone, in which the metal is found, is an aggregate rock of a palish green, or in some places of a rusty colour, and small grain. It is in general in such a state of decay that I cannot venture to guess at the nature of its component parts. In some places it coheres little more than sand, in others it is a soft stone. In almost every part of the gangue small detached bits of the ore may be found, and on digging and clearing away a part I found a vein about one-fourth of an inch thick, inclining from north to south at about an angle with the horizon of 50°, and apparently running east and west. The extent of the gangue I cannot state, as it appears on the surface at the place only where it has been dug. About 15 yards from the place, towards the south-east, is a rock of a very fine grained aggregate with a white opaque ground, and some greenish micaceous matter, probably a composition of felspar in decay with chlorite. In a torrent east

from the mine, and perhaps 30 feet perpendicular below the surface, are two decaying rocks, one a fine grained whitish granite with black shorlaceous specks, and I believe some small garnets; the other consists entirely of black shorlaceous masses united together, and of a foliated texture. The five hills are immense naked masses of granite, and may be considered as belonging to the mineral division next to be described, which extends obliquely to the south, as it advances east from Jathaurnath. Without digging at some expense, there is no saying how the mine might turn out, but there is nothing in its appearance to promise its being rich. A vein on the surface, thus suddenly diminishing, is, I believe, considered as a bad sign. Nor is a mine of antimony of any considerable value.

In many parts of this mineral division iron ore is found, but generally in such small masses that it would not answer for European manufacture, and the whole usually procured in a year would not perhaps fill much more than one of the Carron furnaces. Although the mining, or rather the gathering of the ore, is always conducted by the same persons, who smelt it and procure the charcoal, I shall defer giving an account of the processes until I treat of the arts, and shall here confine myself to an account of the mines. Adjacent to the branch of the second division, which strikes east to Jathaurnath, are several mines, at Kuji, Osla or Majra, at Belhar, Beldiha, Mongrar, Asnahatari and Rangga, where in all there may be 70 families that smelt iron. I had only an opportunity of examining the first mentioned place, but was told that the others were exactly similar. The smelters of Kuji winnow the sand brought down by torrents from the hills called Bara and Bharam, and during the winnowing very dexterously throw out the light siliceous matter, while the ore remains behind in small grains. On breaking these they appear of a black foliated texture, and are attracted by the magnet. The black iron ore in form of sand is found very common in some other parts of this mineral division of the district, especially after rain in the torrents of Lakardewani, but although it approaches very near the above ore, and only differs in its grains being rather smaller, it is in general neglected, yet these small grains found on the surface are generally admitted to make the best iron. The pebbles found intermixed with

the ore at Kuji are mostly quartz, but I found some which consisted of quartz aggregated with the black shorlaceous foliated matter, which I suppose is the common source of the iron ore of these parts.

A little way south from Kuji is Paharidihi, from whence iron mines extend all the way to Chandan village along the west side of the Chandan river. In this space there are at least 150 families of smelters. At Pahari-dihi the people collect the ore from torrents, just like those of Kuji, but it is found in grains as large as barley. After separating the quartzose matter by winnowing, these grains are broken between two stones and again winnowed. They consist of the same black foliated ore as that found at Kuji, and are attracted by the magnet. At Sejuya, seven miles from Jamdaha, the ore consists of similar small grains, but it is found mixed with earth and pebbles, in veins running three or four feet under the surface. The people dig shafts about a cubit in diameter until they reach the vein, which is from one to two feet thick, and they cut out the whole as far as they can reach, or venture to go from the little shaft. They then make another, and thus proceed over the field. The substance taken from the vein is then dried and winnowed, and then beaten and re-winnowed, as at Paharidihi. A little south from Bhungri Simar I found the mine used by the smelters of that place, which is in the same line, and it differed in nothing from the mine last described, except that the metallic grains, instead of being mixed with clay, were contained in a white quartzose sand. Such is the nature of the mines on the west side of the Chandan river.

In the division of Lakardewani, on both sides of the river, are many mines; but it was said that there are only about 100 houses of smelters. Those of Nuni say that they discover the ore by observing some of it on the surface, and then follow the vein by digging little shafts, as I have before described. The veins are nearly horizontal, generally covered by three or four feet of soil and clay, and the sides are of the same; but under the vein are usually fragments of quartz, thickly imbedded in clay. These veins or beds are never known to extend more than a bigah (45 yards) in length, and seldom reach so far; they are from 1 to 1½ cubit in diameter, do not run in a straight line, and often send off lateral

branches. The veins are never found on hills, nor near solid rocks. The Makar Mati, or decayed aggregate rock, is often found in the vein, but always in small nests, seldom containing above two or three *mans*. The whole vein is not ore, this is found in masses, intermixed with clay, and sometimes with fragments of quartz. The mixed matter is taken out and dried, and then the earthy matter is separated by winnowing. The ore is then beaten small, and winnowed again, when it is fit for the furnace. The workmen are frequently interrupted by water, and have not attempted any means for draining their mines. The ore is reckoned of two kinds, Asul or principal, and Dusra or secondary. It is supposed that three parts of the latter give only as much iron, as two parts of the former; but it has never entered into the imagination of the workmen to ascertain the proportion, either by weight or measure. I examined a mine of the Asul ore belonging to the smelters of Pokhariya, about four coss north-west from Nuni. The ore is in irregular smooth concretions, from the size of a nut to that of a small biscuit, and is intermixed with clay and quartz, so as to form a hard substance that requires to be cut with a large chisel. The internal substance of the concretion consists of shining foliated black masses, much like that of the ores which I have hitherto described. It is attracted by the magnet.

About five miles west and southerly from Nuni I examined mines of the Dusra ore, belonging to the smelters of Chanda Bathan, in the Mauza of Pandoriya. The one consisted of grains like barley, mixed with clay, and internally of a very fine earthy fracture, and pale reddish brown colour. Their specific gravity is small; but the particles are slightly attracted by the magnet. At Gamra, south from Dumka, about six miles, I examined another mine of iron, which differed somewhat from the above. The ore was found in horizontal strata, not above a foot thick, and covered only by from 12 to 18 inches of a red clay soil. The miners said that they never had gone deeper, having in many places found abundance of the ore. This ore is in small masses, like those at Pokhariya, but its structure is like that of the Dusra one of Chanda Bathan. It is not however attracted by the magnet. These masses also, before they are put into the furnace, require to be broken and winnowed.

At Dumka I visited a mine of a very different description, and which might perhaps give a supply to a forge of some considerable dimensions; but it is not much valued by the natives, and has last year been deserted. For the space of about 40 feet square the people have made small excavations, and have taken out the ore to the depth of about a cubit. So far it consists of angular masses, from the size of the fist to that of the head, and compacted together; but the fissures are filled with earth, which renders the ore easily wrought. Below this depth the mine becomes more compact, and the natives neglect it, as too troublesome; nor has its thickness been ascertained. Neither has its horizontal extent been determined. Ore has been taken from the side of a tank, about 100 yards distant, and it is probable that the stratum extends at least so far. This ore has every appearance of a slag that has been in fusion, and is not attracted by the magnet. I saw nothing near it of a volcanic appearance; but it is at no great distance from the hills of the eastern mineral division, among which there seem to me to be many traces of volcanic fire. The reason of its having been deserted, seems to have been its hardness, and the size of the lumps, which, before they are put in the furnace, require to be broken to small grains, and to be winnowed. In this mineral division also, the enamel mentioned in my account of the first division, as investing pebbles lying on the surface, may in many places be observed.

Minerals of the northern intermediate division.—The proper minerals of this division, like those of the last, consist of aggregate stones; but they rise in broken peaks, exceedingly rugged; nor can any of them be traced as extending to a distance in a peculiar line; each rock or cluster of rocks is, as it were, insulated, and it would appear, that merely the summits of the rocks come to sight, and that their roots sink very abruptly, as the rocks are in general at very considerable distances from each other, and between them is found a level country, consisting of soil, in which no fragments of broken rock are to be found, unless we consider clay and sand to be such. The most remarkable of these clusters are the three rocks in the river at Kahalgang, three small hills there on the continent, the hill of Bhader, the peaks of Barkop, a rock between Kahalgang and Bhagul-

poor, the two rocks at Sultangunj, Dholpahari, north from Kharakpoor, Chauthiya, south-east from Tarapoor, Rangganath, Ungchanath, and Gauripahar, all south from the same, Mandar, west from Bangka, and Pangchpahar, south-west from thence. The two hills, named Kharai, south-west from Bhagulpoor, and Khajuri, south-east from Tarapoor, are of a different nature, and seem to me scattered portions of the second division. The aggregates of the fourth division, as well as of the third, are both granites and gneisses, and some of both are very well fitted for building; but in this climate both have a great disadvantage; when exposed to the air, they soon are covered with a black mould, that renders them very ugly. Fine blocks of grey granite, with a pale reddish cast, might be procured close to the water's edge from the rocks of Sultangunj and Kahalgang; and the rock of Dholpahari is a beautiful fine-grained gneiss, very fit for building, and at no great distance from water carriage. In this part of the district also, calcareous detached nodules are common, and on the little hills, which overhang the river immediately below Bhagulpoor, are burned for making lime. I no where saw the calcareous tufa in mass, nor are there any mines or pebbles encrusted with brownish enamel.

The most curious mineral phenomenon in this part is found in certain places which are covered with carbonate of soda, called by the natives Kurwa Mati, and collected occasionally by the washermen of the vicinity, and used by them to clean linen. It is said to be found a little south from Bhagulpoor, and I examined the places between Patharghat and Paingti, where it is also found. These last places are on the skirts of the first division, and might be considered as belonging to it; but the same substance found south from Bhagulpoor connects the production with the fourth division. The most remarkable place is in Mauza Habipoor, said to be about five coss west from Paingti. It is on the edge of the plain, inundated by the Ganges, but adjacent to the high land, and extends about 50 yards in one direction by 30 in the other. Between it and a creek, which joins the Ganges, are some fields higher rather than the saline space; but at least three or four days every year the floods rise over both, cover the saline space from knee to waste deep, and of course sweep away every saline particle. In the month of October, how-

ever, the saline matter begins to effloresce on the surface, which is covered with short grass. The washermen scrape the surface, and beat the saline matter from among the roots, and throughout the whole dry season this may be occasionally repeated; but in the rainy season, even when the space is not covered with water, no saline matter is procurable. The most singular thing is, that near the middle of the field in January I found a small well, which appeared to have been lately dug. It was not more than three feet deep, and contained about one foot of clear sweet water. I was assured by the neighbours, that similar water may be procured in every part of the saline space, and that every dry season those, who labour the adjacent fields, dig a well, such as I have mentioned, which gives them a supply of water, but is filled by the next inundation. The saline matter is therefore constantly forming; but it is only in dry weather that it can accumulate, and it is found entirely at the surface. I shall not, however, until farther investigation, take upon myself to say whether the component parts come entirely from the atmosphere, or whether the metallic basis of the soda rises in vapours from the earth, passes through the water as an insoluble substance, and on reaching the surface, instantly unites with the part of the air, usually called oxygen, and thus forms the soda.

Springs and Wells.—In the hilly parts there are many springs, but few are very considerable, and the number is not sufficient to give the inhabitants a copious supply of water; and as they have not there attempted to dig wells, they are very indifferently supplied, and are often under the necessity of going far in search of this most valuable necessary of life. In the plains, at a distance from the river, abundance of water is found in wells, and in general at a very little depth, and of a good quality; although at Ratangunj the well water is hard and ill-tasted. Near the Ganges, in most parts the wells are deep, and their water is often hard and very indifferent, especially if found in red sand or clay. At Gopalpoor, near Suryagarha, about seven years ago, a tank was dug 45 cubits deep, and no water having been found, a well was sunk four or five cubits farther. A stake was then driven two cubits into the ground when the water gushed out, and in about three hours filled the tank. It was expected that the water

of this tank would have been uncommonly good; but the spring seems to have failed, as in the dry season the tank does not contain above 8 or 10 cubits of water, and that as usual exceedingly dirty.

In this part I shall chiefly confine myself to an account of the hot springs, which in fact are numerous, but are confined to eight places, of which the five first are contained in the second mineral division, the next two are contained in the third division; and the spring mentioned last belongs to the first mineral division, which perhaps shows, that the strata of minerals found on the surface extend a very little way only into the bosom of the earth.

The first hot spring that I shall mention is Sitakunda, the fables concerning which have been already detailed in my account of the topography of division Mungger. It is situated on a plain near the Ganges, about four or five miles from Mungger; but all through the plain at little distances, are scattered small rocky hills of quartz or siliceous hornstone, and the stones from among which the hot water issues, are of the same nature; but, so far as I can judge, are all detached pieces. A cistern of brick has been built to include the springs, and forms a pool about 18 feet square, so that one cannot judge so well of their nature, as in the places that will be afterwards mentioned; but it would not appear that any one spring in this division differs from the others by any material circumstance, only that Sitakunda is at a little distance from any hill, and all the others issue from the bottom of rocks. At different places many air bubbles rise from the bottom, and generally many issue at one time, with irregular intervals before the next explosions. Near where these issue, the water is always rather hottest. I visited this spring first on the 7th of April, a little after sunrise. The thermometer in the open air stood at 68° Fahr., and in the hottest part of the reservoir, where many air bubbles rose it stood at 130°. The priests said, that about eight days before it had become cooler, and that the heat would gradually diminish until the commencement of the rainy season. I visited the spring again on the 20th of April at sunset, the wind having been all day hot and parching; the thermometer in the air stood at 84°; in the well it rose to 122°. On the 28th of April I visited it again a little after sunset, the wind blow-

ing strong from the east, but not parching. The thermometer in the air was at 90°; in the well it only rose to 92°. The water still continued clear; but soon after, owing to the reduction of the heat, and the natives being of consequence able to bathe in the well, the water became so dirty as to be no longer drinkable by an European. Indisposition for some time prevented me from being able to revisit the place; but in the beginning of July, on the commencement of the rainy season, the water in consequence of a return of heat, became again limpid; and on the 21st of that month, a native sent with the thermometer, found at sunset that it stood in the air at 90° and in the water at 132°. In the evening of the 21st of September, the thermometer stood in the air at 88°, in the cistern at 138°, and the number of air bubbles had very evidently increased. The priests, in order to magnify the wonder of the hot spring, have made several cisterns round it, and these at all seasons contain cold water, but exceedingly dirty; nor could I perceive any appearance of their containing springs; the water which they contain, seems to be the rain preserved from evaporation.

I saw no appearance of earthy depositions from the waters of Sitakunda; but it is very likely that there may be such on the stones in the bottom, as such depositions are seen at more considerable hot springs of the district. It is indeed usually supposed, that Sitakunda is pure water; but on evaporating about 4¼ quarts to about ¼ pint in a clean iron vessel, I procured about half a dram of earth. This effervesced with nitric acid, which however dissolved only a part; the residuum of the water after evaporation was tasteless; nor did it show the smallest cloud on the addition of a nitrate of silver. The water is however clear, and the heat prevents it from being polluted by the natives, or other animals.

About five or six miles south from Sitakunda, at the western foot of the ridge running south from Mungger, and at a place called Bhurka, is the second hot spring, which arises from three sources that unite in one pool, perfectly in a state of nature, and form a stream nearly of the same size with that of Sitakunda. Two of these come from under a rock of red and grey rude jasper, and are not accompanied by air bubbles; the third rises at a little distance from some spouty ground which occupies a considerable space, from different parts of

which the water ouzes accompanied by air bubbles, which do not issue regularly, but by a kind of explosions, repeated at short intervals. On the 9th of April in the morning, the thermometer, in all the three sources rose to 112°. In this spring also I observed no stony deposition from the water.

The third hot spring is at Rishikunda, about a mile south from the last, and at the foot of the same hill. This spring has been made a place of worship, and a reservoir has been built to collect the water into one pool. This is about 140 feet square, but is rather ruinous, and the springs are unable to heat so large a body of water, so as to prevent vegetation or bathing. The pool, therefore, especially on the side most remote from the sources, is overgrown with aquatic plants and bushes, filled with vermin. The bottom of the pool is in some places sandy, in others rocky, and the water seems to issue all along the western side, from different crevices in the rock. The air bubbles rise from the whole extent of the pool near the hill, and come mostly from the bottom, for a space perhaps 30 feet wide, and 140 feet long; and had the pool been confined to this extent, its heat would have kept it clean. Where the air bubbles issue from among sand, they form a small cavity like a crater. In the centre is a small rising with sundry perforations, through which the air always rises in small bubbles; but every now and then a kind of explosion takes place, an accumulation of air bursts the small rising of the centre; forces its sand to the surface of the water and when it subsides, adds to the size of the little circular mound by which the crater, is surrounded. When I reached the pool, in the morning of the 8th of April, the thermometer in the air stood at 72°. In the water, where it issued from the crevice of a rock, it rose to 110°; and in one of the craters to 114°. In this spring also I observed no deposition from the water. The stream appears to be rather more considerable than at Sitakunda.

About 15 or 16 miles south from Rishikunda are the hot springs of Bhimbandh, by far the finest in the district. They issue from the bottom of a small detached hill, on its east side and at a little distance from the Mon river, which receives their water, and which rises from another detached hill, a little way farther south. The hill from which the hot springs

issue, is situated east from the great irregular central mass of the Mungger hills, and is named Mahadeva. It consists, so far as can be seen, of quartz or siliceous hornstone. The hot water issues from four different places, at some distance from each other; and at each place, it springs from many crevices of the rock, and from between various loose stones, with which the ground is covered. Each of these four sources is by far more considerable than Sitakunda, and many air bubbles accompany the water, which is limpid and tasteless; but evidently contains earthy matter, as the stones, from whence the very hottest parts issue, are encrusted with a tufaceous deposition,which very much resembles the calcareous tufa; but does not effervesce with the nitric acid, unless the separation of a few globules of air, on its first immersion can be considered as such. These globules, however, appeared to be merely air contained in the little pores of the deposition which remains unaltered in the acid, and is probably siliceous. I have no doubt, however, that the water of Bhimbandh, as well as that of Sitakunda, contains also calcareous earth; but this, being more soluble than the siliceous, is not so soon deposited. The stones, from among which the water issues, are warm; but not near so much as the water, nor so as to be disagreeable to the touch. The thermometer on the morning of the 21st of March, in most of the sources stood at 144°; but, when immersed in places, where many air bubbles issued, it rose to 150°.

The water of the Mon river, near the springs, is somewhat hotter than the atmosphere. In the latter, about eight o'clock in the morning of the above mentioned day, it stood at 76°; in the river it rose to 82°. In one place of the stream I oberved some air bubbles rising, and there, although the stream is pretty considerable, the thermometer rose to 98°.

The 5th hot spring is at Malinpahar, about seven miles east and north from Bhimbandh, and this spring is the source of the Angjana river. It is not so large as the Bhimbandh, but exceeds much any of the other hot springs. It issues from the bottom of Malinpahar, a part of the central cluster of the Mungger hills, where a space of about 20 yards in length, and 20 feet in width is covered with fragments of rock, and the water may be heard running under these, and in some places seen through the crevices, until it comes to the lower side, and

unites into little streams, that soon join. The stone, from among which the water issues, is a kind of jasper of a horny colour stained with red. On the 22nd of March, at sunrise, the thermometer in the air being at 62°, on being placed on the stones rose to 80°, on being immersed in the water flowing among the stones it rose to 146°, and on being placed in a crevice of the rock, from whence the water issued accompanied by air bubbles, it rose to 150°, which at all the springs is probably the maximum of heat, and the others probably as well as Sitakunda suffer a diminution of temperature, when the season advances. On the stones, where the water issues, I here also observed a small quantity of earthy deposition. About 20 yards east from the hot springs is a bed of calcareous tufa, that has been already mentioned. In pulling out a stone that had been surrounded by this concretion, I found it warm, although perfectly dry, and the thermometer on being placed in the cavity, rose to 90°.

Of the two hot springs, that are contained in the 3rd mineral division of the district, I visited only one, which is called Tapnai. This, in the dialect of the vicinity, is said to imply merely heat; although Tap in the more polished dialects is now generally confined to the heat of fever. The spring is situated in Palasi Mawza, about a mile east from Lakardewani, just beyond a fine little river called the Gurguri. The water rises from a field sloping gently towards the river, and, commences cold from some spouty ground, and, having passed through this for a little way, reaches a rock of gneiss in a state of decay. At the side of this rock, the spouty ground is about 10 feet wide, and the water and sand are hot, while at irregular intervals air bubbles issue from the latter, not very numerous, but pretty large. When most of these issued, in the dusk of the evening of the 28th of November, the thermometer, which in the air stood at 72°, rose to 148°. The stream, formed by the oozing from this spouty ground, appeared to be somewhat less considerable than that of Sitakunda.

The other hot spring of this division is said to be in Mauza Nunbil, SE. from Nuni about 15 coss, on the south side of the Kendu rivulet, at Kendughat, and near the village called Sapchala. The hot spring belonging to the 1st mineral division I did not visit, as I did not hear of it, until I had

passed to a great distance from the vicinity of where it is. The spring is called Unahi, and is said to be situated in the lands of a village called Pukhariya, which for many years has been deserted, and is situated about four coss N.W. from Beliya Narayanpoor, a great iron manufactory in Virbhum. The water of the spring is said to be very bad, which would seem to imply, that it may have strong mineral impregnations, but the natives detest the limpid and tasteless water of Bhimbandh and Malinpahar, and prefer the water of a muddy tank.

From all the circumstances attending these springs, I think it probable, that the heat is first communicated to some gaseous fluid, and this rising, until it meets the water of a spring, heats it, and issues in part along with it. The original cause of the heat may, therefore, be seated very deep in the earth ; in the superficial strata there are certainly no materials to the mutual action of which it can be attributed.

CHAPTER V.

AGRICULTURE, IMPLEMENTS, IRRIGATION, CATTLE, ETC.

In the statistical table, (see appendix) I have supposed, that there are in this district 2974 square miles actually occupied for cultivation, houses, gardens and plantations, besides 145 square miles belonging to the tribes of mountaineers, and cultivated with the hoe. In my account of the topography I have however had occasion to mention, that for the last two or three years, on account of a deficiency of rain, a very great proportion of the rice land has not been sown, and this will reduce the extent cultivated for these years to 2722. Such occurrences, however, being very rare, in the general tables of occupation and produce I have taken the extent and amount on the average of years, when the whole has been cultivated; and in order to form an estimate for such unfavourable seasons, we may deduct from the quantity of rice stated in the tables the produce of 252 square miles, or 483,840 bigahs.

Articles Cultivated.—The proportion of land, that gives two complete crops in one year, seems to be smaller here than in Puraniya; but the custom of mixing several things, as one crop, on the same field is more prevalent than in any place, that I have yet seen; and there are a greater variety of articles cultivated. A considerable quantity of seed is sown, without previous cultivation, in both the manners mentioned in my account of Puraniya, and in this district the practice seems to have been extended farther, not only in proportion to the quantity of land, but to the number of articles sown. This seems to arise from a greater degree of indolence; but I no where heard of there being fields so far neglected as to produce spontaneous crops of rice.

Plants cultivated for Grain.—Rice, although of less importance, than in the districts hitherto surveyed, is by far the greatest crop. It is of six kinds, which differ in season of reaping.

At Rajmahal the merchant gives 60 sers of rough rice, and receives 37½ of clean. According to my estimate the cleaner has on this rather more than 16½ (16. 6) per cent. of the grain. Three women there clean 60 sers (92 s. w.) a day, so that each for a whole days work gets almost 6 lb. (5. 9) of clean rice. Very little of the rice is prepared into Chura Lawa or Murhi, and the poor for breakfast use chiefly meal, either parched or without having undergone that operation, and made either into cakes (Roti), or into a kind of pudding (Chhattu). Rice is seldom made into meal. Wheat, next to rice, is the culmiferous plant cultivated in the most considerable quantity. It is used in the same manner as in Puraniya. At Rajmahal and Mungger abundance of Mayda or fine flour may be procured; and there are bakers who make bread both after the European and Hindustani fashion. At the capital also there are bakers; but the Mayda must be brought from other places. Wheat is sometimes sown without any previous culture, and near the Ganges, on some overflowed land, requires only one or two ploughings; but in higher parts it requires seven or eight. In the interior again, on the low land near the torrents, the fields of wheat are watered once or twice a month; and sometimes the field is watered immediately before it is sown. In most places towards the western side of the district, on both sides of the river, the wheat is sown in drills, which are about a span's distance from each other. Barley is very little sown without previous culture, and some after one or two ploughings. Like wheat, where the land is stiff, it is usually sown in drills. A great deal is sown mixed with the field pea; both are reaped together, and the grains are used intermixed, and called Jaokerao. In the western parts of the district this is one of the common foods of the poor. Maize is most suited for the higher lands of this district wherever the soil is good, and in time will no doubt supersede most of the others, especially rice, which at present is too much cultivated, and ought to be confined to favourable spots. The maize is used both in cakes (Roti) and puddings (Chhattu), and the people have entirely lost the prejudice of considering it unwholesome.

The next culmiferous crop is Maruya, or the *Eleusine* of Gærtner, which by the northern tribe of mountaineers is called Kodom. On the plains it is reckoned only of one kind; but

on the hills of the northern tribe of mountaineers it is divided into two kinds, one of which is gathered in Aghan (middle of November to middle of December), the other is gathered in Bhadong, or three months earlier. My authority for supposing that the Kodom of the mountaineers is the Eleusine, is their saying, that it is the same with the Maruya of the plains; but such a difference in the time of ripening leads me to suppose that the Kodom, which ripens about the end of November, is not of the same species with the other, and may perhaps be the Gundli to be afterwards mentioned, which ripens at that season. The Kheri mentioned under Puraniya is in this district the next most considerable of the culmiferous crops. It is a very poor grain, and can only be used boiled like rice; its meal is very bad, and the straw is bad fodder.

The poor millet called Kodo, next to the Kheri,* is the most considerable of the culmiferous crops; and much is sown on the low lands near the Ganges. It is a species of Paspalum, and perhaps may be the species which in the Encyclopédie Methodique is named *coromandellianum*, although in some points it differs from the description given in that work. It is used both boiled like rice and parched, ground, and made into a kind of pudding. It does not form cakes. It sometimes occasions vertigo or intoxication, and this quality is confined to some parcels of the grain; all those who eat of such being affected, and the same field will one year produce intoxicating Kodo, and on the next that which is perfectly innocent. This narcotic quality is by the natives attributed to the grain on certain fields, having been infected by a kind of snake called Dhemna, a large poisonous serpent. This opinion is however very improbable, and the intoxicating quality seems more likely to proceed from some spontaneous seed, not readily distinguishable, being intermixed with the Kodo of certain fields. The straw is eaten by cattle.

Great pains are bestowed on the cultivation of China (*Panicum miliaceum*), considering that it is a poor grain; but it thrives here more than any where else that I have yet seen. The fields are divided into little square plots like a garden,

* The order of succession indicates the degree of cultivation of each article.—[Ed.]

and regularly watered. The produce is said to be very great, and from the seed, which is shaken in reaping, a second crop which comes up without any cultivation or trouble, is called Labhera, and is cut about the end of September. China is chiefly used in what is called Mara. The grain is first boiled a little, the water is then poured off, and the grain is heated in the same pot. It is then thrown in small quantities into a hot earthen vessel, the bottom of which is covered with sand, and is parched, which bursts the husks and makes the grains swell. The husks are then separated by rubbing or beating. This Mara, mixed with sour curdled milk, is much used at marriages, and in many parts of the district is considered an indispensable part of the marriage feast, perhaps from this grain having been the first that was reared in the country.

Janera (*Holcus Sorghum*) is a very inferior grain, and seems to be gradually giving way to the maize. The Bajra (*Holcus spicatus*) is to be found in a few gardens as a kind of curiosity, but in such small quantities that it cannot be included in the tables of produce. The Gundli* (*Panicum miliare*), is chiefly confined to the southern parts of the district, which in soil resemble Mysore. The smallest of the culmiferous crops is the Kaun or Kangni (*Panicum italicum*), a grain much superior to most of those mentioned. The number of small birds that are most rapacious after its grain is assigned as the reason of its being neglected. It is chiefly reared by the hill tribes, the northern of which call it Petaga.

The leguminous plants are very important, and, as in Puraniya, the most common is the Mash Kulai (*Phaseolus*) which in the Hindi dialect is most usually called Usid, or Makh. There is a variety of it called Aghani Kalai, which differs in its seed, instead of being green, it is brown, and it ripens about a month earlier. The Arahar (*Cytisus Cajan*) grows with uncommon luxuriance. Great quantities of the Khesari (*Lathyrus Sativus*) are reared, especially among rice stubble, as are also two varieties of the *Cicer arietinum*. The common pea (*Pisum*) has white seeds, like the garden pea of Europe (*Pisum sativum*). The Til, or Sesamum, which, in the hilly parts of the district, thrives remarkably on new-cleared land, especially on a red soil, however poor.

* The Shamay of Mysore.—[ED.]

The plants yielding oil are numerous. *Ricinus* in the parts near the Ganges is a very considerable crop, and I have nowhere seen it growing with such luxuriance as in the division of Gogri. The oil made is good and clear, and is excellently fitted for the lamp; so that it may be burned in the houses of Europeans, and in glass lamps without disgust: but such is seldom, if ever, employed by the natives. This fine oil has, I believe, been often sold as castor-oil, procured by expression; but Bhagulpoor is famous for sophistication; and after careful inquiry I have reason to think, that this is not an expressed oil, and that the following is the process by which it is extracted. Break the hard inner shell *(integumentum)* of each seed between two stones, pick out the kernels, and beat these in a large mortar, adding a little water to form a tenacious paste. Put $2\frac{1}{2}$ sers of the paste in an earthen pot, with 4 sers of water, and boil for about three quarters of an hour. Then scum off the oil, which swims on the surface. From the $2\frac{1}{2}$ sers of seed between 8 and 10 chhataks (1 ser = 16 chhataks) of oil are procured. It is evident, that such a process could not be used in any country where manual labour possessed value.

The rates for harvest vary as in Puraniya; but in general towards the west are not quite so high, and nominally are often so low as the sixteenth bundle, and sometimes as the twentieth; but the bundle which the reaper takes, is much larger than the 15 or 19 which the farmer gets, which perhaps makes the former about equal to $\frac{1}{9}$ or $\frac{1}{10}$ and the latter to $\frac{1}{12}$ of the whole, where the master thrashes. The lara or gleaning is also carried to a greater extent, and I saw some fields cutting, where at least $\frac{1}{10}$ of the grain was left. This is not however all loss to the master; as in many parts the gleaners give him a share. The reason of this seems to be, that the lands have often been assessed by a certain portion of the neat produce; and this gleaning was a combination between the farmer and gleaner, in order to defraud the landlord. In the eastern part of the district the harvest is reckoned equal to $\frac{1}{6}$ of the crop; but this is mostly a nominal charge, a great part being reaped by the owners, or by servants hired by the year. The whole grain is here trodden out by oxen. The granaries of unbaked clay (kuthi) are in universal use; in some of the eastern parts, however, grain is

kept in a kind of large basket, made of straw, which stands in the house like the granaries of unbaked clay. In most parts of the district, on account of the white ants *(termes)*, grain cannot be kept in pits; but in the low inundated lands, where these destructive insects cannot harbour, the pits are used in the dry season.

In the whole course of my survey, I have as yet seen no gardeners so expert as those of Mungger. They are of the Koeri cast, and possess some little stock. Formerly they were employed in cultivating the poppy, and took annually two crops from their land, one poppy, the other maize or maruya; but, the poppy having been prohibited, in its stead are reared wheat, baygan, ricinus, onions, garlic, and other vegetables. Each man has usually 4 or 5 bigahs (110 cubits square), or from about 7½ (7.562) to 9½ (9.453) bigahs, Calcutta measure, and he requires two strong cattle, which both plough, and water the land; for in the dry season the whole is watered with a leather bag. A great deal of the labour is performed with the hoe, and his wife and children assist in weeding and gathering the produce. The gardeners pay a rent of from 7 to 9 rupees a bigah, and of course must be very industrious. The crops of wheat are exceedingly heavy, and certain. Of the 5 bigahs, 3 for the first crop will be maize, 1 maruya, and 1 ricinus, mixed with sem. Of the maize land 1½ bigah give as a second crop, wheat, 1 baygan, and ½ safflower, mixed with a few amaranths, or other greens. The maruya is succeeded by garlic, or onions, mixed with karela and radishes. The *sem* and *ricinus* occupy the whole year. The crops are every year changed; land yielding wheat and maize one year gives pulse and ricinus, or maruya and onions another. The produce of each bigah, customary measure, cannot be estimated at less than 20 rs. a year. The soil is good, but not better than a very great part of what is now waste; and the wells are very deep, being from 25 to 30 cubits, as is usual near the great river. This shows what might be done. It is true, that in the interior there would be little sale for the vegetables; but a bigah of this size cultivated with grain, and with the same pains, would no doubt produce to the value of 12 or 14 rs.

Ginger is here reared only for the consumption of the country, and is commonly planted in mango groves, shade be-

ing favourable for the growth of most plants of the scitamineous order. The plant here also is hairy. Turmeric is only reared for the consumption of the country, and not in a quantity sufficient for the demand. Capsicum is seldom cultivated in large fields, but small plots are common.

At Mungger are reckoned two kinds of onion, the bhagalpuri and patniya, the former little, and the latter large. Both are cultivated in two manners. One is by sowing the seed, and transplanting the young onions; such are called Dhemra. The other method is by dividing the root into slips, which may be done at all seasons. Such onions are called Saga, or Sachi. Many onions are sent to Calcutta. The same is the case with garlic. Methi, or fenugreek is cultivated not only in gardens, but in separate fields.

Of the Ajoyan, (or Ammi indicum), considerable quantities are sown on the muddy banks of the rivers, as the inundation retires. The Channani of the farmers is the same with the Randhuni of Ronggopoor, and is cultivated in fields; but the druggists sell the sweet fennel by the name of Channani. Dhaniya, or Coriander, and the Saongp, or anise, are common. The Jira is confined to the very borders of Gaya. The seed resembles that of cummin, or perhaps is the same. The most common Baygan, at Munger, is called Golbhanta. It has prickles, and is therefore a kind of the Solanum Insanum. It is shaped like a pear, and may usually weigh half a pound. This is the Golta of Puraniya. The Chengga, which has a cylindrical black fruit, and prickles on the leaves, is the Baramasiya of Puraniya. The Baramasiya of this district, has a fruit shaped like a horn, polygamous flowers, and no prickles. It is therefore a *Solanum Melongena.* Its fruit is greenish, or dark red. The species which in European hothouses is often called the egg-plant, from the resemblance of its fruit to the egg of a common fowl, is pretty common, but has no peculiar name. The European potato *(Solanum)* has come into very general use at Mungger and Bhagulpoor, and at both places considerable fields are raised, and the roots are preserved throughout the year. They are not so large as those of Patna; but some are sent to Calcutta, and to several intermediate places. The cultivation has only for a very few years extended to the natives; and they never are used as the staple article of food; they serve only when fried in oil, salt,

and capsicum, as a seasoning for grain. They are called Gol-Alu. The Shukurkund Alu *(Convolvulus Batatas)* is commonly reared in gardens; but no extensive fields are occupied with this root, which seems to be giving way to the potato most common in Europe. Yams *(Dioscoreas)* are not in great variety.

What at Mungger is called Pekchi, seems to be a smaller variety of the Komorbhog of Ronggopoor. The bulbs are small, many adhering in a cluster to a bunch of stems, and are ripe from August to October. The Aruya of this district which is the most common, seems to be different from that so named at Nathpoor, and is the Muckhi of Dinajpoor. Cuttings of the roots are planted about the end of January, and are watered once in four days, until the rains commence. Many shoots spring up close to the parent, and under these many proliferous bulbs are formed, larger than those of the Pekchi, although the plant is much smaller. They are fit for use about the end of September, and weigh from 1 to 1½ lbs. each. They are dug, when ripe, and kept for about three months. The petioles or leaf stems are seldom used. It is said, that a bigah will give 50 *mans* of root, worth 8 anas a *man*, which is at the rate of about 27¾ *mans*, worth 13¼ rupees, from the Bigah, Calcutta weight and measure, or at the rate of 6842 lbs., worth 39½ rupees an acre. The ground is manured with cow dung and ashes. The Ol *(Tacca sativa)* of Rumph, is raised in small quantities, in corners about the houses, as the *man* is about Calcutta: but so little pains are bestowed on it, that the root always retains a considerable acrimony. It is said to be good only on a black free soil, which in this district is not common. Radishes are not near so common as in Dinajpoor, but in most parts of the district many small plots are to be found. They are all of the red kind. The carrot is cultivated in fields, is much eaten by the people, and what can be spared is given to cattle. If watered two or three times in the season, the carrot will give 100 *mans* a bigah, Mungger measure and weight, or double the produce of the Arum above stated. The value, by wholesale, is about 8 r. at the rate of 2 r. for 100 heaps, of about 10 sers each: but this land gives another crop in the year, that which is cultivated with the Aruya produces nothing else. Other statements, not likely to be exaggerated, make the produce ½

more, or 600 heaps a bigah. The carrots are ripe about the end of January, and will keep throughout the spring, when fodder is scarcest. Plantains are very scarce.

In the villages scattered through the woods of Bangka and Lakardewani, two kinds of Dolichos, called Kursa, are reared about the hedges, and their beans are used as Tarkari. The smaller or Chhota-Kursa has at least a great resemblance to the Dolichos pruriens, and the hair on its fruit produces the most violent itching; but it differs in so many particulars from the Cacara pruritus of Rumph (vol. 5, page 393), and the Nai corana of Rheede (vol. 8, page 61), that I consider it as a distinct species.

The Kursa, although exceedingly like the other, differs in the hair of the fruit, which is soft, and excites no itching. Neither species is worth cultivating, the beans being very indifferent. Rheede attributes invigorating powers to those of his plant, and it is probably some such idle notion that induces the people here to use so wretched a vegetable.

Plants cultivated as greens.—The Amaranthi are by far the most common. Spinach is not much used, because it will only grow in the dry season. The Basella is called Poyi, and the Chenopodiums are a good deal used. The Gulpha is the Purslane, and its leaves are often used as a green, as is also Fenugreek in the cold season. Fennel leaves are sometimes used as a green.

Plants used as an acid seasoning.—There are still fewer than in Puraniya, and mangoes are almost the only thing in request. The leaves of the Chandana (*Hibiscus cannabinus*), which is cultivated for making ropes, are occasionally employed. The Europeans have paid some more attention to their gardens than in Puraniya; but they are still very backward in their fruits. I have already mentioned most of the fruit trees that have been introduced. Mr. Christian, of Mungger has figs, and several gentlemen have grapes, which are tolerably good; but both the figs and peaches would require shelter from the rain, by giving them a western or southern exposure, from whence rain seldom comes, and by placing them against a wall covered by an arch. The common European vegetables thrive well enough during the dry season; but asparagus has made little way; and it is the only one that grows during the rainy season. Artichokes

are in abundance, and continue all the heats of spring. It seems extraordinary that this plant, which thrives uncommonly in the very cold and moist climate of the highlands of Scotland, should in India prefer the most sultry and arid seasons and places. In Bengal Proper, it can scarcely be brought to produce.

The fruits reared by the natives are very much the same with those of Puraniya, and equally neglected, so that I have no occasion to repeat what has been said on that head. The only additions, that I have to make, are respecting those of the cucurbitaceous kind, which near the Ganges are much cultivated. The water melons (Tarbuj) are very good. The best kind of melon is here called Kharbuja, and seems to me to be the Cucumis Dudaim of Willdenow. It is depressed at the poles, and its smell is very fine, but it is insipid, and very poor eating. The Phuti Kangkri or Dam, differs from the plant, so called at Puraniya, in the shape of its fruit, which instead of being oval is cylindrical, and it is often two feet long, by a diameter of from four to six inches. It has an agreeable smell, but is still more insipid than the Kharbuja. The Mithuya Kangkri of Mungger is, I suspect, the *Cucumis flexuosus* of Willdenow; but differs very little from the two above plants, except that its fruit has little or no smell, and in place of being cylindrical, or depressed, tapers to a point. Although its native name would seem to imply its being sweet, the fruit is exceedingly insipid. The common cucumber is very abundant, and tolerably good. Boiled or stewed it is one of the best vegetables that the country produces. Some of those, who make garlands near the towns keep small plots, where they rear flowers for sale.

The only plants cultivated as medicines to any extent are the *Nigella sativa,* and common cress. The former, it must be observed, in the dialect of Maghadha, is called Mangrela, while the name Kalajiri, by which it is known in Puraniya, is in this district given to the *Conyza anthelmintica* of botanists, the Sungraj of Bengal. In the gardens, besides the cress, which is by far the most common, there are raised the following medicinal herbs. Cissus quadrangularis, species of Zinziber. One kind, the root has a flavour of the mango. Gahakaran, a scitamineous plant. Israulgad, an *Aristolochia,* which seems to be the *Indica;* but differs in some points

from the accounts given of that plant. Isaddaula, *Euphorbium Tithymaloides*. Sudarsan, perhaps the *Radix toxicaria* of Rumph (VI. tab. 69), a species of *Amaryllis*. Chita, the *Plumbago zeylanica*. Dhanattar, lemon grass, which, I believe, has never been known to flower, and cannot therefore be referred to any botanical system. Barbari, Nazbo, the two kinds of *Ocymum* mentioned in my account of Puraniya.

Plants cultivated for making thread or ropes are of little importance, and exclusive of the lands belonging to the hill tribes, amount to only about 18,000 bigahs, most of which during the year produce also other crops, as will be seen from the tables of produce. The Crotolaria juncea, called Son in Bengal, in this district is called Kasmiri, and is reared in small plots by the fishermen for making their nets, and is applied to no other use. The Chandana, Amliya or Kudrum, of this district is the *Hibiscus cannabinus* of botanists, is cultivated nearly in the same quantity as the Corchorus, and the crop generally occupies the ground for a whole year. The natives reckon its ropes stronger and more durable than those of the Corchorus; but they are still harsher, and its fibres cannot be reduced to fine thread.

Cotton in this district is by far the most important of these crops, and the interior is very much fitted for its cultivation, so that at least none needed to be imported; but although 12,000 bigahs are said to be cultivated on the plains, besides a very considerable quantity on the hills belonging to the northern tribe of mountaineers, much is still imported. A few plants of the Kukti, the wool of which has the colour of Nankeen cloth, are scattered thinly through the fields of the Gajar. I have not been able to trace most of these kinds through their stages of growth, so as to ascertain with sufficient accuracy their botanical affinities. The only one indeed, which I have been able to examine, is the Gajar, which differs in nothing essential from the *Gossipium* of Rumph (vol. 4, *pl.* 12), which in Puraniya is called Bhadai; but the season of its growth, and manner of cultivation are totally different. It is sown about the end of June, ripens about the end of April, and is then cut; but for two years springs from the roots, giving a crop annually at the same season. For the manner of cultivation, and value of produce, I must in general refer to the tables.

Plants cultivated for saccharine juice.—Besides the palms and the Mahuya tree already mentioned, the only article under this head is the sugar-cane. It is chiefly cultivated near the banks of the mountain rivers, where it can be supplied with water by means of canals, and in the vicinity of Rajmahal, where it grows with more luxuriance than I have any where else observed. In the interior it is not so rich, but still is tolerably good, and is cultivated with some care. The lands there are level and rich, and under constant crop, much as in Ronggopoor and Dinajpoor: but in Rajmahal they are swelling, and rather stiff, but the field generally, although not always, is allowed a year's rest between the crops. In the former places the produce usually stated was about 5½ *mans* a bigah (Calcutta weight and measure) of the extract; but this is ridiculous; for although the natives stated, that the greater part of their cane is of the small kind like a reed (Nargori), I saw none such; and my assistants recollect very little. I do not think, therefore, that less than 10 *mans* of the thinner extract (Rab) can be allowed for the bigah. Very little of the cake extract is made.

There is here a greater variety of kinds than in any of the districts hitherto surveyed. Of the Kajli, Khagri, and Nargori, I have already had occasion to treat. The Kajli is by far the best, and is confined to the vicinity of Rajmahal; but the mango of other places seems to me to be the same, and is chiefly used for eating without preparation, and much is consumed in that manner. The Paungdi and Raungda are tolerably large yellow canes, and one of them at least would appear to be the same with the Bangsa of Puraniya; but both agree with what I was able to notice concerning it. The Keruya is a poor small cane.

Plants used for smoking and chewing are of very little importance. The tobacco is not adequate to supply the demand of the country, although in most places it seems to thrive. It is on the north side of the Ganges alone, that it is cultivated to any extent. That which produces the largest and mildest leaf is called Mandhata or Dhamakul; the smaller and most narcotic is called Desla or Thariya. Betle leaf sells very high.

The hemp reared for intoxication occupies only 13 bigahs that are avowed; but, as I have said in my account of Pura-

niya, a few plants are in many places reared in hidden corners. The people here only allow 2 *mans* a bigah, but not the smallest reliance can be placed on what they say. I neither saw, nor heard of any poppy, although a considerable quantity was formerly reared. Catechu, Ajoyan, Saongp and Dhaniya are also chewed. There are no betle-nut palms.

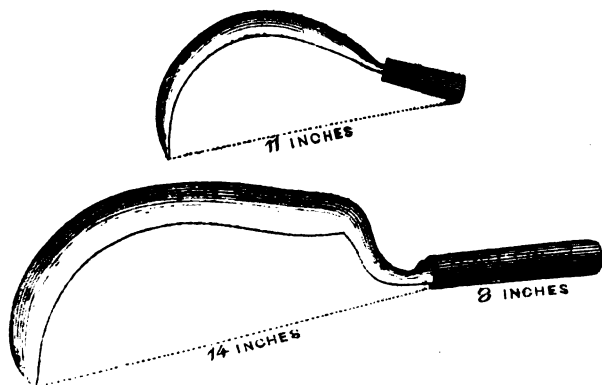
Plants used for dying.—Indigo as usual, is by far the most important.* Safflower, the Kusum of the natives, is of more importance here than in Puraniya. About 18,000 Jujub trees are used for rearing the lac insect. The mulberry is confined to the eastern part of the district.

Implements of Agriculture.—The plough does not differ materially from those of the districts already described; but it is always provided with a little bit of iron. To draw the plough scarcely any cows, but a few buffaloes are employed. The other observations made on this implement and its management, in my account of Puraniya, are entirely applicable to the ploughmen of Bhagulpoor. Wheat and barley are usually sown in drills; and the drill consists of a bamboo, having at its top a wooden cup, into which a man drops the seed. The bamboo is tied to the beam of a plough, and its lower end passes through the body of the plough, just behind the iron, so that the seed falls into the furrow, and is covered by the next.

In the eastern parts of the district the Mayi is used; but in the western, as in Puraniya, its place is supplied by the beam or plank called Chauki. In order to save the skin ropes many farmers here use for dragging it an iron chain fastened to a hook, and they have had sufficient ingenuity when it is dragged by ropes made of hide, to use a hook driven into its upper side, and to this to fasten the rope. Many farmers have the Bida or rake drawn by oxen, and it is usually provided with iron teeth, or at least the teeth are alternately of wood and iron; but in many parts this implement is not used, and there is nothing to supply the want of the harrow.

The reaping hook is of two kinds; the Hangsuya, which has no teeth, and is the larger of the two; and the Kachiya, which has teeth, and is very small. The former is most

* Dr. B. gives a long account relative to indigo, which at the present day would be superfluous.—[Ed.]

usually employed to cut grass; but in some parts they use for the latter purpose a large sickle called Jhapau, and the Hangsuya (here represented) is used to cut corn.

There is nothing remarkable in the weeding iron (Khurpi), the hatchet (Kurhali), or the bill (Dao.) The hoe (Kodar) is of two kinds, differing chiefly in length of shaft; but not distinguished by appropriate names. On the north side of the river every family has a large wooden pestle and mortar for beating rice, and the lever (Dhengki) is not in use; but on the southern side many families, even for their own consumption, use the latter instrument; and it is universally employed by those who beat for sale.

The sugar mill (Kalu), is of the same kind with the Kolgachh of Ronggopoor. The iron boiler is however in general larger, and the number of earthen pots through which the juice passes, before it comes into the boiler, where inspissation is completed is much smaller, seldom exceeding five. A set of works clears about five acres of cane in a year, and is usually made at the joint expence of from five to ten neighbours who may rear that quantity, and who unite their cattle and servants to clear the whole crop. The iron boiler is the only part of the apparatus at all valuable, and is often hired by the season.

A small cart called Saggar in the southern forests is in universal use, and is employed to bring home the harvest, to carry goods to market, and to bring fire-wood. It is exactly on the plan of the Mysore cart, described in my account of that country, but more rude, and consists of an axle-tree

with two wheels made of three planks, joined together with wooden bolts and cut round, with a hole in the middle for the axle-tree. The body consists of two sticks tied behind to the axle-tree, and joined together before at the yoke. It is drawn by two cattle. Near the Rajmahal the farmers have a kind of waggon on four wheels, very nearly as rude as the above-mentioned cart; but it is chiefly used to bring firewood from the forests. The use of the small cart, however rude, is a great improvement, and should put to shame the farmers on the banks of the Ganges, who flatter themselves with being more civilized than the people of the forests, and yet continue to carry home their harvest on their heads and shoulders.

Manures.—Notwithstanding the abundance of fuel, a great deal of the cow dung is collected for burning; and except in Kalikapoor, on the land called Rarh, I saw no such thing as a dunghill. When in other parts of the district it is wanted to enrich any land, it is done by collecting throughout the night a number of cattle on the field. No great pains are however bestowed on this; for most of the cattle that are kept in Bathans, are not brought at night to the fields that are in the vicinity of the wastes where they feed, and their manure is totally lost. On the whole however, the farmers are rather more attentive to this improvement than those of Puraniya, especially on their sugar land, which is always manured, and the effects are very visible on the crops. Oil cake and fresh earth are given to betle-leaf, and the latter is given to the mulberry. Ashes in many places are neglected, in others they are given to winter crops. In the high rice lands called Rarh, which constitute the cultivated parts of Kalikapoor, the farmers collect cow-dung and ashes for that grain, and also manure it with mud from the bottoms of old tanks; and their condition shows, that they find an ample reward for the little additional labour that they bestow. Manure is usually given to each field once in the two years. Wherever the land is inundated, and has received the mud of the Ganges (Reti), manure is considered as totally superfluous. Much more attention is paid to watering than in any of the districts formerly surveyed. In the marshes of Rajmahal the spring rice is watered by an instrument like a canoe; and on the banks of the Ganges by a basket suspended from four ropes.

The canals from rivers are called Dhar, and are made and repaired entirely by the owners of the land, who appoint petty officers to distribute the water. These canals are usually from 1 to 3 coss long, and usually 4 or 5 cubits deep, and as much wide; but a few extend from 3 to 6 coss in length. Their principal use is to supply the rice fields during the rainy season, when there happens to be long intervals of fair weather, and during the month Kartik, when the rains have usually ceased. At this time the mountain torrents contain a stream, which is turned into the canal by temporary dams. In the rainy season the rivers are abundantly high to enter the mouths of the canals. The cost of digging these was stated to be $2\frac{1}{4}$ rs. for every 100 *gux* long, by 1 wide and 1 deep. The guz is $33\frac{1}{3}$ inches, which is at the rate 346 cubical feet of earth moved to a short distance for the rupee. Each farmer makes small dams across the canal in order to force the water upon his fields; and, when these have received their allowance, the dam is broken, and the water is permitted to run to the next man's possession.

The method used at Mungger for raising the water for irrigation is by a leathern bag, drawn by two oxen passing down a slope, with a rope passing over a pulley or roller. This instrument is called a *mat*, and differs from the *capily* of Mysore in having no contrivance, by means of a leathern tube and double rope, for evacuating the bag, when it reaches the surface. Two men are therefore required for each mat; one to manage the oxen, and one who, when the bag reaches the surface, pushes it aside, and, placing it on a cistern, allows the water to run out by slackening the rope. He then, as the cattle ascend the slope, throws the bag into the well. No time is lost in this operation, but an additional hand is required. The common depth of wells at Mungger is from 25 to 30 cubits, and some are still deeper, and yet bear the expense. In the interior southern parts, all the wheat and sugar-cane are watered; but the implement used is a pot suspended from one end of a lever. In some parts of the district, in place of suspending the pot to the end of a lever, it is lowered and drawn up by a rope passing over a roller, which turns round between two forks, but is not thicker than the arm, so as to afford very little increase of power.

Throughout the Behar part of the district, asses are pretty generally diffused among the washermen. An ass sells from two to three rupees. The stock of cattle of the cow kind in this district, when compared with Bengal, is of great value. Near the Ganges, on both sides of all the Behar part, the cattle are fully as good as those of the best parts of Puraniya. In the parts belonging to Bengal they are inferior; but are not so small as in Dinajpoor or Ronggopoor. In the forest districts they are of an intermediate quality, and seem to have been rapidly improving; for Captain Browne, in his account of that part, speaks of the cattle as being uncommonly small, which at present is by no means the case. An improvement, indeed, might be naturally expected; as since the abolition of plunder, the best cattle from the banks of the Ganges frequent these forests, and by an intermixture of breeds will no doubt render both of the same value. The cattle kept by the tribes of mountaineers, and fed on the pastures at the roots of their hills, are said to be remarkably strong. They are used for carriage alone. Uncommon little pains are bestowed on the nourishment of the sacred beasts, and they are treated with the utmost severity in exacting their labour, but in other respects great attention is bestowed on them. It is only in Lakardewani that some impure taungtars have been permitted to work the cow, and a most violent opposition was at first made to such an atrocious innovation; but the obstinacy of the barbarians prevailed, chiefly, I believe, because they were thought powerful in witchcraft, and because disputes with such people were considered as dangerous. This tenderness towards the cow no doubt has tended to improve the breed; but has been counteracted by a very great proportion of the labour being performed by bulls, nor did I hear any where of good prices being given for bulls reserved for breeding, the number of which is indeed small, nor is this compensated by many consecrated animals, although these are not only more numerous in proportion than in any of the districts hitherto surveyed, but also more pampered and vigorous. The bulls that are wrought in the plough sell lower than even cows, and these sell a little lower than labouring oxen of the same size. An estimate of the whole quantity of milk that the owners of the cows receive, and of its value, will be found in the Appendix.

Farms.—The high castes do not enjoy the same privileges as in Puraniya. In no part are they more exempted than others from paying rent for the ground occupied by their houses; but in most parts of this district it is from few only that ground rent for houses is demanded, and it is only in some parts, chiefly in the portion of the district which belonged to Bengal, that they are allowed to occupy land at a lower rate than others. A certain part, however, of the military tribes hold land by military tenure, either free of rent, or for a mere trifle, and the lands of both are miserably neglected. But besides these a great deal of the land is rented by the high castes; and a great deal of this is supposed to be at the same rate with what is paid by common cultivators; but their rent is seldom levied with rigour, and the kinsmen of many of these farmers being employed in the management of the estates, various shifts have been invented to lighten their burthen. None of them work with their own hands, and it is not customary in this district, except just in its southern extremity, to relet land to under tenants, neither are those who cultivate for a share numerous, so that most of the land rented by the high castes are cultivated by their slaves or hired servants. The higher rent paid here makes them more industrious and attentive than in Puraniya, and their stock of cattle also is very large.

The next class of tenants consists of the tradesmen and artists. Among these I have only included such of the Goyalas as deal in milk, for in this district a very great number of that caste does not deal in milk more than any other farmers. A great many tradesmen work part of the year in their art, and the remainder at their farm. Here a great part of the petty traders *(Beparis)* are included among the Pangniyas (or tradesmen).

The third class of tenants consists of Chasas or ploughmen; but this denomination of persons contains not only the tenantry who are willing to labour with their own hands, but servants, day labourers, and slaves. In Kalikapoor I saw some wealthy men of this class, like the great Muhammedan farmers of Dinajpoor, and these were also of the same faith; but in general this class is very poor. Most of the more wealthy are petty dealers, and are distinguished from the petty dealers of commercial tribes by being called Grihastha-beparis, in

place of Beparis. The fourth class of tenants consists of under tenants, except in the southern parts of Lakardewani. In the appendix will be found an estimate of the proportion of live stock belonging to the high castes, to tradesmen, and to farmers; and an estimate of the proportion of rent paid by the three first classes, and of the proportion of ploughs held by their owners, or men of their families, by those who cultivate for a share, by hired servants or slaves, and by under tenants. This will explain many circumstances relative to the stock of farms, and will enable the intelligent reader to judge in what manner the burthens fall on each class of the tenantry.

The expense of implements is next to nothing, so that the only stock worth notice is plough cattle. In many parts the tenant pays, nominally at least, one half of the produce as a rent; but this is on valuable crops. The expense of cultivation however, even allowing for the frauds, to which the high castes are incident, cannot well exceed upon the whole, one half of the gross produce, as in the former. The cost of harvest is here in general smaller; but on the whole, even where the tenant does no work himself, every charge is, I am certain, defrayed by half of the gross produce; nor can the rent paid to the landlord amount to one half of the remainder.

There are fewer great or wealthy farmers than in Dinajpoor, or at least they conceal their wealth so carefully, that it is unknown, and in fact becomes either useless to themselves or others. Owing, however, to the system of advances having made comparatively less progress, the people are not so much involved in debt and difficulty. In the appendix* will be seen an estimate of those who pay their rent as it becomes due, from their own stock; of those who borrow ready money; of those who take advances for the purpose, but who at crop season complete their engagements; and of those who, having taken advances, are annually falling more and more in debt. Similar statements have not been formed for the districts hitherto surveyed, but in all of them, I am persuaded, it would have appeared that the first class would have been less numerous,

* Dr. Buchanan gives tables on all those subjects, similar to those of Behar; (see Note 1 Appendix) but the totals, or averages, will be sufficient for the formation of a general idea on the subjects referred to. [Ed.]

and the last class more predominant. Money, borrowed in small sums to pay rent, usually pays at the rate of $\frac{1}{32}$ part per mensem. The arears of rent due to landlords are a trifle.

There has been no attempt to regulate the size of farms, which are nearly of the same size as in Dinajpoor or Puraniya, but it is not so common a custom here as in the latter district, for poor farmers to unite stock, to enable them to complete what is requisite for a plough: each man, in by far the greater part of the district, has as much of his own, or borrows it.

Scarcely any of the landlords make advances to the tenants, and those who follow this practice, are chiefly confined to the eastern parts of the district, and it is given only to new comers. It would be more useful in the wastes, where poor men alone can be expected to come, and where new settlers are much required. The advances which are made are usually in the form of a loan for one year, at the rate of 2 anas interest on the rupee, or 12½ per cent. The rents are much more equally assessed than in Puraniya; and in the same vicinity are in general somewhat in proportion to the value of the land, but in different parts vary astonishingly; and on this subject in particular, the utmost pains were taken to keep me in the dark. What I have learned on the subject shall be detailed in my account of particular estates. In general, however, it may be observed, that except in a few places, and on rice land, it is too low to act as a sufficient stimulus to industry; and it will be noted, that it is only the rice lands, and the parts which are high rented, that are in a tolerable state of cultivation.

What I have said in Dinajpoor and Ronggopoor concerning the illegal exactions, alleged to be taken by the Zemindars, or their agents, are entirely applicable to this district; and, although the landlords have not here the excuse of the privileges granted in Puraniya to the higher castes, I am persuaded, that in general the people are worse used than in that district, and to this chiefly must be attributed the miserable condition to which many parts of it are reduced.

The tenants of Behar in general transact their own business with the agents of the Zemindars, and it is only among the rude tribe called Saungtar, and in the Bengalese parts of the district, that a kind of chief tenant is employed to transact the whole affairs of the community, a practice, as I have men-

tioned, that is common in Ronggopoor, and which seems to have been pretty universal in India; for the chiefs of villages, by whatever name (Mandal, Makaddam, Gauda, Shanaboga, &c.) known, seem to me to have been originally agents for the tenants, and not officers of government, or assistants of the Zemindars, as is now usually the case; and wherever the native customs have been carefully preserved, and well administered, the appointment of this officer is always regulated by the inclination of the tenantry. In Behar, as I have said, the tenantry have more confidence, and chiefs of villages have in general been disused. The Bengalese are more bashful; and it is only the Mandal that is gifted with the faculty of speech before a person of such consequence as the village clerk (Patwari); nor is it supposed that each Mandal should have audacity enough to find utterance before his landlord; so that on estates of any size there is a chief Mandal, who is spokesman for the others.

The rents of this district are levied in two manners, Nukudi and Bhauli. The former is a money rent, and is collected by messengers in the same miserable instalments that have been mentioned in my account of Puraniya, and which give rise to all the vexations that are liable to such a mode of collection: but here this rent is free from the evils that in Puraniya have arisen from inequalities of assessment. For although in the part of the district where the revenue is paid to Moorshedabad, the assessment on the high castes is trifling, yet the mode of having created the inequality is quite different, and is productive of much less evil, as will be explained in my account of the estates of that part.

Bhauli, is a rent paid in kind, and is confined to the part of the district which is comprehended in Behar, and is chiefly confined also to rice, with very little on other kinds of grain. It, in fact, is similar to the division of watered crops which takes place in the south of India, and seems to have arisen from the same source, namely, the uncertainty of these crops, which in some dry seasons cannot be at all taken, while in others that are favourable they are exceedingly valuable. In the former the tenant could not pay a money rent, and in the latter, it is fair that the landlord should participate. Various deductions before division are made from the heap, especially the whole expense of harvest; and, after these deductions,

the landlord in some places receives one-half, in others $\frac{22}{40}$; but then the landlord, as I have said, is at all the expense of the canals, and generally at all that of the reservoirs for irrigation, and the harvest, one of the heaviest deductions is in favour of the tenant. In my account of Mysore, however, I have taken occasion to show that this practice is a great encourager of sloth; and as a means for collecting the revenue of the state is liable to the most gross abuse. Even here, where the Zemindars might be supposed capable of attending to the division, the collusions of their agents and the tenants, I have little doubt, produce numerous frauds, and have given rise to the following mode of avoiding the actual divisions. It has been customary for the Zemindars to send persons to value the crops, and to make an agreement with the tenants for a sum of money in place of his share. The tenants, so long as the estates continued in the management of the Zemindars, were abundantly satisfied with this plan; but some persons, who have farmed the rents of certain estates, have of late given occasion to heavy complaints; and the tenants allege that they are not at all consulted in the valuation, and are compelled to pay much more than the real price of the Zemindars share. Tenants who hold lands by Bhauli are in fact no better than the Adhiyars of Puraniya and Dinajpoor, only that no man's whole rent is paid in that manner. It is evident, however, that the landlords, on the whole, must have been defrauded, as many of these tenants live as easily as those of districts, where the rent does not amount to more than one quarter of the gross produce, and is often much less; and many of them here are of high castes, and abundantly indolent and careless.

The tenures, by which farmers in this district hold their land, are extremely various. I shall here only mention a few circumstances of a more general nature. With regard to the duration of the leases, some part is in perpetuity. Some of these are held by persons of high rank, and considerable possessions, being called Rajas and Tikayits, and according to the regulations these ought to have had their lands separated from the Zemindaries, to which they belonged, when the under Zemindars, at the perpetual settlement, were freed from vassalage; but being then totally ignorant of the law and customs of Europeans, they were persuaded to avoid

applying for this relief until the time allowed had elapsed. This they now bitterly repent. Some of them, having had their leases confirmed by the European officers of revenue, refuse to submit to any renewal, and their lords are earnestly soliciting them to accept of new leases on any terms, in order to set up a claim of the investitures being only for life. Others, who have quietly submitted to this rule, now find that they are harassed by claims on account of the renewal. In the wilder part of the district these various claims have produced the most violent dissensions and heart burnings, and nothing but the fear of a superior military force has prevented the parties from having had recourse to arms. These tenants, as I have said, are often men of considerable rank, but by the Zemindars are called Ghatwals, or guards of passes. Some of them still are bound to attend their lord, or to assist the officers of police, with a certain number of armed men; while others are bound only to pay a certain sum of money. It is most notorious that the lands of these latter are comparatively thriving, and that progress is daily making in bringing more into cultivation, and in introducing comfort and the arts; while the lands held by the military tenure are going backwards; nor in the present state of affairs do these military services seem to be at all required; while, if any military force was requisite, this would be totally ineffectual. In these military tenures another cause of dispute has arisen; the landlords pretend that a certain extent has been assigned to each Ghatwal, or tenant, according to the number of men, that he is held to maintain, and that on condition of the military service the tenant is entitled to hold this for two anas a customary bigah, or less than one ana for one of the Calcutta measure; but if any more land is cultivated in the villages occupied by the military tenants, it is liable to full rent. The tenants deny this, and allege that the whole villages, which they occupy, were assigned to them for the support of their men, and the payment of a fixed sum in money, and that they may cultivate as much or as little of the land as they please.

Formerly the custom of not fixing the rent until the crop had been sown was common, but fortunately it has now in a great measure gone into disuse. It must be observed that, except in the leases in perpetuity, few or no tenants, espe-

cially in Behar, have any proper document either for the extent of their possession or the amount of the Zemindars claims. The leases, as they are called, are granted to two or three chief men of the village by name, with an &c. comprehending all the others; and they do not specify even the total of the lands, nor the total amount of the rent, but merely the rate of rent; and sometimes not even that, but only command the tenants to work, assuring them that the customary rent alone will be demanded. At the times of payment bills are made out according to this rate, for each tenant, and after having paid these for one year his rent cannot be increased without its being alleged that he has cultivated more or better land than he at first did. Great room, however, is left for unjust demands of this nature, as in the bills there is nothing specified but the amount of the rent in money; and the practice of such vague agreements exposes the Zemindar as much as the tenant to fraud, as his agents and the tenants may enter into collusions in forming the first bills. Such practices in letting leases are, I believe, contrary to law.

Those who cultivate for a share of the crop, those who are hired by the month or season, and those who are usually hired by the day, (taking hire is considered so very disgraceful, that few even of the poorest farmers will acknowledge that they perform any work except on their own farms) next require consideration. It is usual to bring as many ploughs to work on the same field as possible, for it is alleged that six ploughs in one day will produce more effect than one plough in six days; and it is the custom to transplant, weed, and reap a field at once, probably for the sake of tumult and bawling in which the natives delight. Poor neighbours, therefore, usually unite on such occasions, and by turns work in company on their respective possessions.

Many tenants who have leases may be said to cultivate for a share, and are often supposed to give more than a half of the produce to the landlord; but there are very few who cultivate the lands of tenants for a share, and in the Behar part of the district they are in general confounded with under-tenants, who pay a rack rent, under the general name Kurtali; while small tenants, who have only stock for half a plough, are called Adhiyars; but in the Bengalese part those who cultivate for a share are called Adhiyars, while under-

tenants are called Kolayit. It is there that those who cultivate tenants' land for a share are most common, and none of the rent there consists of a share of the crop.

In the Behar part of the district, ploughmen are seldom hired by the year, but generally for the ploughing season alone. They usually in fact sell themselves for that time; for they receive from 5 to 20 r. as a loan, without interest, and, until they can repay that, they ought to work every ploughing season for their master, receiving daily about 3 sers, Calcutta measure of rice in the husk, or of some coarse grain. If the master has 4 beasts, the ploughman works 6 hours; if there are 6 beasts he works 9 hours. He does nothing for his master but work the cattle, either in the plough, or with the plank or rake; so that, if he is industrious, he may do little jobs in the afternoon. When there is no ploughing, the servant is usually employed to weed or transplant, getting a a trifle more than his common allowance of grain. The whole profits on harvest is secured by the master to his own ploughman, as far as possible, and many contrive to have the advantage of two harvests; as in the southern and northern parts of the district the seasons of the prevailing crops are different, so as to admit of the same persons sharing in both. Although the allowance for harvest is smaller than in Puraniya, yet the sharing in two harvests, and the higher allowance given daily, render the condition of the ploughman here somewhat better, so that a man and woman who have two children, can spend 2 rupees a month; and it is not alleged, that many of them run away. The money advanced defrays the expense of marriages, funerals, and such ceremonies, and is lost when the labourer dies. His allowance of grain and harvest may amount to 15 r. a year. The woman makes the remainder, in which she is very much assisted by gleaning, most of the reapers having a strong fellow-feeling in leaving her a large quantity of ears. Owing to the extravagant jealousy of the men the women here can, on the whole however, gain less than in Puraniya. In the Bengalese part of the district the ploughmen usually receive from ¾ to 1 r. a month, besides food and clothing, but are engaged the whole year, and perform every kind of labour. Of course their condition is better than in the western parts.

In the southern corner of the district, Belpatta and Kali-

kapoor, although the language spoken is a kind of Bengalese, the ploughmen are called Kamiya, and Krisan, the usual term, is applied to another class of labourers. These have neither provisions, land, stock, nor seed, but borrow the whole, and cultivate as much as they can. When the crop has been reaped, and the expense of this operation deducted from the general mass, the master takes double the quantity of the seed. The remaining produce is divided into three equal shares, of which two go to the master, and one to the Krisan; and out of this he repays whatever provisions he has borrowed, with an addition of 50 per cent. Such people are exceedingly poor. The reward for those who tend cattle is very nearly the same as in Puraniya; old men, women, and boys can at least procure a supply of food by tending the cattle that remain in the villages; and those who tend cattle in the wastes have higher wages than ploughmen; and it is alleged, derive very considerable advantages from the milk, of which they defraud their masters; but they lead a hard life, although not one of severe labour.

There are in this district few Chauthariyas, who, as in Puraniya, plough twenty days on their master's field, eight on their own, and two on that of the person who tends the cattle, the master furnishing the plough and cattle. Day labourers here receive about the same allowance as in Puraniya, that is, about 3 sers of grain a day, or money and grain to the value of between from ¾ ana to 1 ana a day. The condition of the labourer is here no worse than in Puraniya; that of the ploughman is better; nor have I heard, that day labourers here are paid in advance, except when wanted by Europeans. Their number is very considerable.

What I have said in my account of Puraniya, concerning the manners, conduct, and education of the Zemindars, is in general applicable to those of this district; except in one point, in which the Zemindars here most eminently differ and honourably distinguish themselves. In general I found them most attentive and polite to me as a traveller, and more especially those of the highest families, and greatest possessions. Some new and low men about the capital were reserved; but everywhere else I was visited and received with great cordiality; and every assistance was given to supply my wants.

The general management of estates is nearly the same as in Puraniya, only less of the rents, at least until very lately, were farmed out to middlemen, called here Mostajers; but in the southern part of the district the term Mostajer is given to large farmers, who take a considerable extent, and relet it to under-tenants. Some of the estates under the immediate management of the landlords, are badly enough conducted; but all, or at least most of those, whose rents are farmed, are going backwards. When the rents are farmed, the Mostajer generally engages to pay the whole rental that appears on the books of the estate, after deducting the establishment, and this is carefully preserved; so that his only legal profit should be what waste land he brings into cultivation. Little can arise from that point, most farmers leaving the estate as bad, and often a great deal worse, than when they took it. Besides, many give large sums to the owner for the farm, and of course make up this and a profit by vexing the tenants. These, however, are often able to bear additional payments, having much more land than that for which they pay.

The Zemindars, notwithstanding the indulgence that has been shown them in the assessment, have not the least confidence in the perpetual settlement, and take every means in their power to conceal their profits. Imagining that I had come with a view of inquiring how far their taxes might be increased, they were in general anxious to show me statements of their condition, by which it appeared that they had little or no profit. Some, indeed, pretended, that their lands were an expensive burthen. So far as I could understand, these statements were copies of what they had shown when the settlement was made; and seem to have been the foundation upon which it was conducted. I have not the smallest doubt, that these statements are totally unworthy of credit, and that the profits of the Zemindars, where any pains have been taken to cultivate the land, are enormous: but in many places their distrust and caution seem to have prevailed, and they avoid cultivating more than will just enable them to live, and pay the trifling revenue that has been imposed. Some part of the settlement was, I believe, made by measure, and a certain number of bigahs have only been conveyed by the deed. In many such cases I am persuaded, that an actual measurement would discover, that the Zemindars possess much more

than their right, and it would be of the utmost advantage to the country, were they deprived of the overplus. The number of bigahs, which their rights convey, afford abundant means, if used with industry, of giving them ample profit: and of this they would more avail themselves than they do at present, when the immense possessions that they hold for a trifle, were they properly cultivated, appear to them a temptation to oppression that government could not resist. The nominal expense of collection in the part of the district especially that belongs to Behar, is not in general quite so high as in Puraniya; but still is enormous, and arises from the same causes.

Pergunah Bhagulpoor (Bhagulpoor Glad) occupies almost the whole of the Kotwali, and Ratnagunj, and part of Kodwar, Bangka, Fayezullahgunj, and Kumurgunj. In all, exclusive of hills, rivers, and barren ground, it may contain, abundantly capable of cultivation, 14,20,000 Bigahs, Calcutta measure, or about 900,000 of the customary measure, of which last about 5,50,000 may be actually occupied with houses, gardens, plantations, and fields, and about 3,50,000 are waste. Of course, some such must always remain, for roads, burial grounds, market places, broken corners, and the like, but that need not amount to more than the 50,000 odd Bigahs, leaving 300,000, that are unnecessarily neglected for 5,50,000 that are cultivated. In order to form some notion of the state of different parts of the pergunah, I have calculated as follows:—

	Calcutta Bigah.		Customary Bigah.	
	Total.	Occupied	Total.	Occupied
Kotwali........	1,42,800	1,26,000	90,490	79,840
Ratnagunj	5,38,200	4,21,300	3,41,000	2,67,000
Kodwar........	1,32,700	84,000	84,100	53,230
Bangka........	4,36,300	1,51,000	2,76,500	95,040
Fayezullahgunj .	1,68,228	84,114	1,06,600	53,300
Kumurgunj	2,200	1,100	1,400	700
	14,20,428	8,67,514	9,00,090	5,49,110

The usual measure is 5½ cubits the pole, 18 poles each way, making a Bigah. The pole is laid on the ground, so as to measure exactly its length; but with so short a pole, and the carelessness usual in native measurements, the line followed

will be seldom straight, and the lines will seldom intersect each other at right angles, and the deviations of both kinds produce, in proportion to their extent, a diminution from the proper size of the bigah. If properly measured, the customary bigah contains nearly 22,725 square feet.

In Barkop, the leases are called Meyadi, all for a short number of years; and when these expire, a new bargain is made for what pays money rent (Nukudi); but three-fourths of the rent is levied by a share of the crop (Bhauli), which is divided equally between the landlord and tenant, after deducting the expence of harvest; but a valuation is usually made, and the tenant, if satisfied, gives the amount in money. The money rent on lands regularly cultivated is one rupee a customary bigah, good or bad, which is at the rate of about 10 anas Calcutta measure; but the Zemindar complains that the tenants never cultivate the fields for more than two years, and then desert them, and go to another waste spot; for large deductions are made to all those who take in new lands, a trifle called Khil being accepted for the first year, and a very poor rent (Kum) for the second. This is intended as an inducement to bring new settlers; but in fact is a powerful means of continuing the present waste state of the country; and therefore ought to be most strictly prohibited. In fact the new land is much more productive than the old, and ought rather to pay a higher rate.

Besides these rents, the Zemindars as Chuklahdar or chief of a district, (Tappa), and as Mokaddam or chief of the contained Mauzas (manors), takes a commission of $2\frac{1}{2}$ anas on the rupee ($\frac{5}{32}$) of money rent, and of $2\frac{1}{2}$ sers on the *man* ($\frac{5}{40}$) of grain that falls to the tenant's share. At crop season each Mauza also presents him with three rs., and at different festivals with two rs., one male goat, and one pot of curdled milk. The village establishment is chiefly paid by the tenantry. Eleven (Patwaris) clerks, receive $\frac{1}{4}$ ana on the rupee ($\frac{1}{64}$) of money rent, with $2\frac{1}{2}$ sers of grain on each bigah thus rented, and $\frac{3}{4}$ ser on each *man* ($\frac{3}{160}$) of the tenant's share of the crop, when the rent is paid by a division. Thirty messengers (Gorayits) are allowed a little land at the expence of the Zemindar, and $\frac{1}{4}$ ser on the *man* ($\frac{1}{160}$) of the grain on lands let for a share. Four Baniyas take the same rate, and measure the grain when it is divided. Almost the whole of

the rents are farmed out in small lots of from two to four Mauzas for a short term of years. The farmers make with the tenants a bargain for the duration of their engagements; and the tenants allege that they are so squeezed that the cultivation is gradually diminishing. The farmers of the rents have no authority to dismiss any of the village establishment.

The general establishment, kept up to collect the money from the farmers of the rents, is as follows: one Dewan or superintendent, 5 rs. a month. One Gomashtah or agent, 7 rs. a month. Three accountants (Mohurers), 10 rs. 2 anas a month. Five Peyadahs or guards, $7\frac{1}{2}$ rs. a month. Two Kotwals or messengers, 25 bigahs of land. It is evident from these allowances, that each must have perquisites at the expence of the tenantry.

In Parsanda the leases are also granted (Meyadi) for from two to nine years. One-fourth of the land pays a money rent, the remainder pays one-half of the crop. Rice land (Sali), and land (Kheri), said to produce two crops, that is high land in full cultivation, pays money rent from 12 to 22 anas a bigah, customary measure; land of an inferior nature (Vari), if cultivated with the crops called Korwa (Kulthi and Arahar), pays 2 to 4 anas; and, if cultivated with winter crops, it pays from 6 to 8 anas. Here also the Zemindar complains that the farmers will not cultivate more than two years on account of the deduction of rent made for that period. The Zemindar is also Chuklahdar, and on that account, when the crops are divided, he takes one-half of the gross produce, with a commission on the gross produce of ($\frac{3}{160}$) $\frac{3}{4}$ ser on the *man*. The high castes, all those who lease lands for cultivation, tanners, potters, blacksmiths, washermen, and barbers, pay no ground rent for their houses. All others pay at the rate of $57\frac{1}{2}$ anas a bigah. The village establishment is in general paid by a commission on the gross produce of the land rented by a share of the crop.

Ten Patwaris (clerks), receive $\frac{3}{4}$ ser on the *man* ($\frac{3}{160}$) of grain, and the Zemindar gives them $\frac{1}{4}$ ana on the rupee ($\frac{1}{64}$) of the money rent. Fifteen messengers (Gorayits) are allowed $\frac{1}{4}$ ser on the *man* ($\frac{1}{160}$) of grain, and from 1 to 5 bigahs of land each. Six Baniyas or measurers, are allowed $\frac{1}{4}$ ser on the *man* ($\frac{1}{160}$) of the gross produce. A much smaller

proportion of the rents are farmed than in Barkop, and the estate is not in quite so bad a condition. The general establishment is, one agent (Gomashtah) 7¼ rs. a month. Two accountants (Mohurers), 6 rs. a month. Two Vakeels or agents to attend the judge and collector, 2 rs. Sixteen Peyadahs or guards, some receiving lands, some 2 rs. a month. The village establishment in Fayezullahgunj consists of six (Patwaris) clerks, who receive from the Zemindar ¼ ana on the rupee ($\frac{1}{64}$) of the money rent; 52 Pasbans or messengers, who receive in all 380 bigahs of land, and subsistence when on duty at a distance from home. The chief establishment consists of one Tahasildar or steward, at 18 rs. a month. Two Peshkars or assistants, at 5½ rs. each per month. Two clerks (Mohurers), at 5 rs. each per month. One Foldar or valuer of money, 2 rs. per month. Six guards, at 2 rs. each per month. One sweeper, at 4 anas per month. Sacrifices (Dev-Khurch), 3 rs. per month. Stationery, 2 rs. per month. This establishment, it must be observed, is decently paid, having been appointed by the collector, when he managed the estate by an agent.* The present farmer of the rents has relet part of them to 109 petty tyrants. The tenants on the assessed lands are said to amount to 2007.

Tappa Mandar, belonging to a branch of the present family of Kharakpoor, contains about 64,000 bigahs, of which about 40,000 may be cultivated, and its superior condition to Barkop and Parsanda, in its immediate vicinity, may be attributed to four causes; first, it is much higher assessed, paying 1600 rs. a year; secondly, it has no sort of Ghatwali or irregular military establishment, a constant source of indolence and disorder; thirdly, the amount of the rents is generally stated in the lease, without rate or measurement; and fourthly, the rents are not farmed. It is worse cultivated than the lands north-west from it, owing to being lower assessed, and it is better cultivated than the lands south from it, which are infested by the Ghatwali rabble.

Very little is let on a division of crops, and the tenures seem on a good footing. By far the greater part is let at a rack rent for a certain specified sum for each farm, without

* I give these as illustrations of the general system in the village tenures.—[Ed.]

any rate or extent being mentioned. This tenure is called Moshukkushi. The leases are, however, rather too short, being only from three to seven years. A little is let from year to year by a certain rate for each bigah. This is called Bighati. The rents are said to vary from 2 anas to 1¼ r. a bigah, the low rates, as usual here, being given only to new comers as an encouragement, and amount to very little of the whole.

These are the outskirts of the Pergunah of Bhagulpoor, which are indifferently cultivated, and very lowly assessed. The remainder is tolerably cultivated. About a tenth-part of it, indeed, scattered in Kumurgunj and Fayezullahgunj, is only about half occupied, owing to the contagion of bad neighbourhood; but of the remainder, about 70 per cent. is occupied. The free land in the whole Pergunah, entered in the public registers, is 62,476 bigahs and nine entire Mauzas; six of these are in the outskirts already mentioned, and if all the land, claimed there as free, were admitted, it would occupy nearly the remainder; but so far as I can judge from the documents before me, the fact is, that the real quantity there does not exceed 5000 bigahs, and is probably not so much. I shall therefore reduce the total amount in the well-occupied part to 38,000 bigahs and three villages, for which we may allow 2000 customary bigahs; so that the whole of this portion being about 570,000 customary bigahs, the free land will amount to about 10½ per cent. of the whole, leaving behind rather more than 510,000 customary bigahs. This portion of land is not burthened by any of the irregular military establishment, but the invalid establishment occasions a heavy deduction. The portion however of this establishment, which falls on this part of the district, I cannot exactly ascertain; partly because many of the invalid villages have lands in more than one Pergunah, and partly because the names, by which these villages are usually known, are totally different from their official denomination, so that I cannot trace the respective situations; but perhaps it may be about one-fifth of the whole, which will give about 29,700 bigahs customary measure, purchased by the Company, and 10,000 bigahs still belonging to the Zemindars, but which hitherto have produced no advantage to them. There will still remain 470,000 bigahs at the disposal of the Zemindars, and

this pays to government 85,727 rs. 13 anas, 7 pice, which is at the rate of $5\frac{1}{2}$ (5.48) customary bigahs, or $8\frac{1}{2}$ (8.652) Calcutta measure for the rupee, on a soil most extraordinarily fertile. The rented land in this part, in its present condition, cannot be less than 348,000 bigahs customary measure, and the rent on this is not on an average less than $1\frac{1}{2}$ r. a bigah, giving a gross rental of 517,000 rs. I do not think that I have in any degree exaggerated this rental, and from thence, together with the other lands of the Pergunah, a judgment may be formed of the care which was bestowed on the public interests in the settlement. Had the assessment of the whole Pergunah been made at 150,000 rs., with an annual addition of 10 per cent. until it rose to 300,000, I am persuaded every possible inch would have been now occupied, and perhaps the condition of the Zemindars better than at present; for it being judged prudent that all possible means should be taken to conceal the greatness of their profit, vast sacrifices are made for the purpose. Even in the time of Akbur, when the value of money was comparatively high, the Pergunah, as appears from the Ayeen Akbery, (Gladwin's translation, vol. 2, page 22 of the Jumma), was assessed at 117,403 rs. in place of 99,445 rs. which it now pays.

Perhaps one half of the rent is paid by a division of the crop, the Zemindar, after deducting harvest, taking one-half. The remainder is let for a money rent, according either to 20 different qualities of land, from 1 ana to 4 rupees a bigah; or according to the nature of the crop; the former is mostly adopted on the high lands, the latter on the inundated. A great many of the leases are Gorabandi, which the tenants pretend to be in perpetuity; but the Zemindars allege are only for life. Others are Meyadi, or for a few years. The village establishment here is heavy; and, when the rents are farmed care is taken to keep it undisturbed.

The Patwari or clerk receives from about $\frac{1}{4}$ to $\frac{1}{2}$ ana on the rupee ($\frac{1}{64}$—$\frac{1}{32}$) of money rent, and generally $2\frac{1}{2}$ sers on each bigah let in this manner, with $1\frac{1}{2}$ ana a year, on every house rich and poor. These are paid by the tenant. He gets from the landlord $\frac{3}{4}$ sers on the *man* ($\frac{3}{160}$) of all the grain received. The Gorayits or messengers wait on the Patwaris, and get each from 2 to 5 bigahs from rent, and 2 chhataks of grain

on the *man* ($\frac{1}{320}$) of the rent in kind. The Baniyas value the money, and weigh the grain, and are allowed ($\frac{1}{160}$) of this rent. The potmaker is allowed half as much. The Chuklahdar knows the boundaries, and receives $\frac{3}{160}$ of the rent in grain. The Dihidar is a land measurer, and watches to prevent the depredations of cattle. These persons are only employed in some places, and get $\frac{1}{128}$ of the money rent, and $\frac{1}{160}$ of the grain rent. Dakchaukis or post boys, get each from 2 to $2\frac{1}{2}$ bigahs of land free of rent, and transmit from one to another all letters belonging to Zemindars or officers of government, until they reach their destination. The Dosad watches the village by night, and in the day goes messages, and receives from 2 to 10 bigahs of land free of rent, with $\frac{1}{160}$ part of the rent in grain. All these charges are paid by the landlord. The tenants pay the expense of measurements, which are frequent. No great extent of the rents are farmed, and the practice is chiefly confined to the remote parts that are half cultivated.

The properties are very small, and the owners prudent careful men. Few of them know anything of their family history, some of them not even the name of their grandfather. Many of the smaller cannot read, and in the whole of Ratnagunj the best part of the Pergunah, no Zemindar who resides, has any higher education than to be able to read common accounts, although several of them are Brahmans. Many of them are called Malekiyats or Mokaddams. These were formerly chiefs of Mauzas, that had made an agreement in perpetuity with their landlords, and on the new settlement were freed from vassalage.

Pergunah Chhai (Chihy Glad.) forms a fine estate on the north side of the Ganges, where it occupies almost the whole of the extensive division of Lokmanpoor, and a small portion of Kumurgunj. The land here is measured by a pole applied to the ground, and in some places is 120 cubits, in others only 110 cubits square. The cubits also differ, some of them being 18 inches, others containing $\frac{2}{7}$ more; but in the most common the pole is of $5\frac{1}{2}$ long cubits; there being 20 poles square to each bigah, so that this contains 45,050 feet, or is a little more than an English acre, or than $3\frac{1}{3}$ bigahs of the Calcutta measure.

Of 302,829 customary bigahs belonging to Zemindars, it was

stated, that only 105,424 were cultivated. The most common pretence is, that the whole has been swept away by the river. The soil is indeed much lighter and more liable to injury from floods, than the southern bank of the river; but on the whole is of a tolerable quality.

In the time of Hoseyn Shah king of Bengal, to whom this part of the country was subject, Chhai was divided among a great many petty Zemindars, under the management of a Tahasildar or steward, to whom a certain Rajput named Yasamanta, was appointed Jumadar, or commander of his guard. Some years afterwards, the concern being profitable, this man purchased 13 (Mauzas) manors from various owners, and took the title of Khan, which, although a Tartar word, is now assumed by many Hindus of rank, and even by Brahmans. At that time there was another Yasamanta residing at Dharhara in Tirahoot, who being a notorious robber, seized on some treasure belonging to the king, who being enraged sent his son to punish the offender. This young man giving himself little trouble in the difficult investigations of the law, and having heard that the robbery had been committed by a certain Yasamanta, took the Jumadar, who happened to be the first person of the name that he found, put him to death and burnt his house. During the execution a faithful female slave concealed the two sons of Yasamanta; and when the danger was over carried them to Gaur, and presenting them to the king, demanded justice. The king having investigated the matter, found that his son had been guilty, and ordered that he should be delivered to Krishna Das, the eldest son of Yasamanta. The prince's mother applied to this Rajput, and procured her son's pardon, bestowing in return the Zemindary of the whole of Pergunah Chhai, except Tappa Dira, which was left to the ancient proprietor.

By far the largest estate in the district is that of the Kharakpoor Raja, which in the family records is usually called Mahalat Kharakpoor, and is irregularly divided into Pergunahs, Tappas, and Mauzas, and occupies the whole of Tarapoor, a great portion of Bangka and Mallepoor, with some parts of Suryagarha, Lakardewani, Kumurgunj, Gogri, and Ratnagunj. This was formerly the property of a family of Kshetauris, which resided at Kherahipahar, and the Kshetauris were dispossessed by a Rajput. The traditions

current in his family, which, as I have said, differ from those of the Kshetauris, are as follow.

Three brothers, Dandu, Vasudev, and Babu Mahindre, of the Kindwar tribe of Rajputs, and sons of a Singhal Ray, came from their paternal abode at Sibirat, in Pergunah Saruyar, in the west of India, and settled at Masdi, near Kumurgunj. Being soldiers of fortune, they took service and became very great favourites with Sasangkar, the Kshetauri Raja of Kharakpoor. During a friendly intercourse, they had an opportunity of perceiving how his house might be attacked; and on the night of the 7th of Aghan, of the Fusli year 910, (A.D. 1503) having collected a band of Rajputs, they suddenly attacked the house and put the Raja to death. Dandu immediately proclaimed himself Raja by beat of drum, and from time to time destroyed 51 petty Kshetauri chiefs, who had depended on Sasangka, and seized on their estates. This is said to have been in the reign of Ebrahim, king of Delhi, when affairs were in great confusion; but it must be observed that in the inscription at Madhusudan, mentioned in the account of Mandar, the son of Vasudev is stated to have been alive in 1599, which is scarcely reconcilable with so early a date for these events. The date of the inscription is farther confirmed by the accounts of the remaining Kshetauris, which have been mentioned in my account of Parsanda and Barkop. Dandu left his conquests to his son Rup Sahi, who had two sons, Sanggram Sahi and Narendra Ray. The former succeeded in the year 946 (A.D. 1549), during the reign of Akbur, who hearing that in these parts there was a Raja of great pride, who would not pay a tribute, ordered Jahanggirkuli, the Subah of Patna, to destroy the rebel. On this service the subah employed an officer named Bajbahadur, who for some months attempted in vain to force the Raja's entrenchments, at the mouth of the recess in the mountains called Marak-kol. He then gave 1000 rs. to one of the Raja's soldiers, who, in the Fusli year 1008 (A. D. 1601), assassinated his master. The widow, Rani Chandrajysti, and her son, Toralmal, held out the stronghold for six months, when, both sides being tired of war, peace was made; and, on the kind promises of the Muhammedan officer, the family consented to visit Delhi, where Toralmal was immediately thrown into prison. These transactions give no high idea of

either the vigor or regularity of the Mogul government, during its highest perfection, in the end of the reign of Akbur. Jahanggir having released Toralmal, appointed him a Morchulburdar, or person who fans the king with peacocks feathers. During the course of his attendance, being on a hunting party with the king, he attacked a tiger sword in hand and put the beast to death; on which occasion the king was so well pleased, that he raised him to the rank of an Omrao, and converted him and his three sons to the faith in Muhammed. The Raja then took the name of Rozafzun, and was betrothed to a daughter of Bajbahadur, the officer by whom his father had been assassinated. The young lady, however, considered this marriage as highly degrading, and would not admit the Raja to her bed. His mother was highly indignant at such an affront offered to her son; and, complaining to the king, the Raja was honoured with a less haughty but more illustrious bride, as she was daughter of Moradbukhsh, the king's uncle. The Raja, on this occasion, obtained the command of 3000 horse for himself, and of 1000 for each of his two eldest sons. The youngest became a Fakir, and obtained two mauzas of free land (about 4040 bigahs), which has reverted to the family. The whole of Pergunahs, Haveli, and Kajra, parts of Kharakpoor, were settled on the Raja free of rent, the former for Sanak, or table expense, and the other as Eltumga, or a gift. A mauza also was fixed upon the family as Jaygir, and various commissions were granted to them on the amount of the assessment. These commissions were Zemindars Rusum (two anas on the rupee), Melkiut, Chanda, Kanungoe, Nukudi, and Nankar. The Raja considers the whole of these as completely separated from the Zemindary, and as his property, were the lands to be sold for arrears of revenue; and the Jaygir Eltumga and Sanak are no doubt entered in the public records. The claim to the others is doubtful, as in all probability the Zemindar, when these grants were made, accounted to the king for the whole proceeds, and was allowed the above commissions for his trouble and profit; and of course his claim ceases when he no longer performs the office. The Raja, after obtaining these favours, was allowed to visit his estates, and his second son obtained the office of Morchulburdar. In the year 1038 (A. D. 1631), Raja Afzun

died, and was succeeded by his eldest son, Raja Behroz. His brother, Abdul Singha, having died, the Raja obtained his office, and, while he held it, distinguished himself in battle, and obtained some lands, called Chuklah Medanipur, in the Virbhum district, which have been since lost. He was then appointed Sahur Nesham, or royal standard bearer, and returned to enjoy his estates. He had four sons, Tahuyar Singha, Hoseyn-kungyar, Bahurbur-kungyar, and Kungyar-Garshayestah. The family seems still to have had a hankering after their original customs, as each of these sons took a Hindu title. Tahuyar succeeded his father, and had seven sons. The eldest went to Delhi, and became sword bearer of Aurungzebe. He accompanied one of the king's sons on a hunting party and killed a wild buffalo sword in hand, on which occasion he obtained a grant of the estate called Garhi; but before he could take possession he died of the small pox. He left two sons, Arjus, or Rozafzun the second, and Muhammedazum, or Abedsur. The eldest became Raja, and succeeded to his father's office in the year 1134, during the reign of Muhammed Shah. In 1141 (1734) he died, and left his estates to his son Mozuffur ali; but, owing to his youth, the management for seven years devolved on his uncle. When Mozuffur ali grew up he entered into the service of the Subahs of Bengal, who had then become independent, and served Mahabutjung, Serajuddoulah, and Jafurali Khan. When Kasem Ali rose into power, he sent into Kharakpoor a Tahasildar with 5000 men, to levy money, and the Raja retired to Ramgar, but was persuaded by Buali, brother of the Subah, to come to Mungger, where he was thrown into prison. Soon after his family was caught and plundered; but about this time, the English army advancing, Kasem Ali retired to Patna, and in the confusion the Raja made his escape. On the restoration of Mir Jafur, a Muhammed Aziz, was sent into the country in command of the troops, and he plundered it. After him came a Mir Haydur Ali, who allowed the Raja no authority, and gave him no commission. At this time a Mr. Barber, if I understand the native pronunciation, was at Patna, and to him Mozuffur sent his son to complain. The gentleman, having made inquiries, sent back the young man with an order, that the arrears of commission should be paid, and displaced the officer (Foujdar) who commanded in

Kharakpoor. When Shetab Ray obtained the management of the revenues of Behar, Abutaleb, the officer commanding in Kharakpoor, lodged a complaint against the Raja, alleging that he was a turbulent bad man, on which account the Raja was again deprived of all authority, his house was plundered by the officer, and his family was thrown into prison; but he effected his escape into the forest of Jagannathdev. The Raja now sent an agent to Moorshedabad, and complained to Mozuffurjung, then the justice general (Foujdar) of the province, who issued orders to Shetab Ray, that justice should be done. Accordingly Fuzulali, the Raja's son, and the family were released; and Abutaleb, the officer who commanded in Kharakpoor, was recalled. This wretch, knowing the fate that awaited him, took poison, and his whole wealth was secured by Shetab Ray, who restored nothing to the family, and sent another officer who allowed the Raja no more authority than the former had one. On this the Raja sent his son and Bholanath, his dewan, with another complaint to Moorshedabad; but by the way they met Shetab Ray, who sent the son back and persuaded the dewan to accompany him to Calcutta. The Raja, knowing by this that his dewan had betrayed him, sent another agent to Calcutta, who gave security, and obtained an order that the management of the estate should be restored to the Raja. About this time the house of Prandatta, the Kanungoe, or register, was robbed, and the officer commanding immediately sent a charge against the Raja, as having been the perpetrator, which his family of course deny; but it was believed by government, and a European subaltern, Mr. Clerk, with two companies of seapoys, was sent to protect the native officer (Tahutdar), who was appointed to manage. On this the Raja retired to the forests, but sent his son to meet the officer. When the young man came within a day's journey of the seapoys, some treacherous Ghatwals informed the officer that he had brought many men and intended to fight. On which the officer marched by night, and, surprising the party, put many to death; but the Raja's son made his escape. Then Mohan Singha, a Rajput Ghatwal, informed Mr. Clerk where the Raja was concealed, and this officer, advancing suddenly, caught the Raja and sent him to Patna, where he was put in irons. In 1177 (A. D. 1770) he petitioned against the Ghat-

wals and native officer. They were called before Shetab Ray, their accusation declared groundless, and the Raja was released from prison, but ordered to remain at Patna.

On the 24th of Magh 1183 (A. D. 1776), before any investigation took place the Raja died, his son Kader ali having been born a few days before, and having received (Tika) the mark of Raja from Prasad Singha, who is the head of the family, and still a Hindu, who receives an annual allowance from the Raja. Rudramohan, the faithful security, informed Mr. Barton that the Raja had no son, and that the proper heir of the family was Mahusen ali, a half-brother of Fuzulali's, and who being an idiot, was a proper heir for a manager. Some time afterwards Mr. Barton found his error, and in 1188 (A. D. 1781), Mr. Hastings issued out an order (Purwanah), directing Kaderali to be put in possession. Such is the account given by the family. How far it is true I cannot say; but in the modern events there is nothing improbable. It is however very likely, that in the confusion which ensued during the overthrow of the Mogul government, Mozuffur might have refused payment of the revenue; such being the usual practice whenever there is a want of military force.* Kaderali is a man of plain unaffected manners, but exceedingly obliging. His disposition is said to be mild and just, but he has been expensive, and is involved in pecuniary difficulties, in order to extricate himself from which he has farmed the rents of almost his whole estates to a man, who has advanced him large sums of money, who has thus very great authority, and is said to abuse it by oppressing the tenants.

According to the space which Kharakpoor occupies on the map, it contains about 47,69,000 bigahs Calcutta measure, of which I conjecture about 8,97,000 may be rivers, marshes, hills, rocks, or barren land, and 38,72,000 fit for the plough. As the whole pays only to government 68,155 rs. 10 anas 13 gs. we may readily conclude, that it is in a wretched state of cultivation; and, so far as I could learn, not more than 16,50,000 bigahs are occupied. The condition perhaps, would on the whole have been worse, had not vast alienations

* The history of this family has been given entire, as it will serve to shew the manner in which many estates have come into the possession of their present occupiers, and how Zemindars or tax-gatherers, were converted into the actual proprietors of land.—[Ed.]

taken place, so that the assessment is somewhat more decent on the remainder, and there some stimulus has been given to industry, the example of which, and its advantages, prevent the other parts from being totally abandoned.

The estate called Chandwe Pasoi, belonging to Div (Lord) Rupnarayan, so far as I can conjecture, amounts to almost 7,40,000 Calcutta bigahs, of which 1,17,000 may be rivers, hills, rocks, or otherwise barren, and about 25,000 may be cultivated. He has a great extent of the fine land on the banks of the Chandan, and these are fully occupied, and let for rent. The cultivated lands scattered thinly through the woods, are in general given free of rent to the younger branches of the family, to servants, and to the armed rabble that keeps up his notions of self-importance.

In the assessed land Rupnarayan grants leases for from two to four years to each tenant, specifying by conjecture the extent of the possession, and the rate at which such as is cultivated, is to pay. When the lease expires, the rate may be altered; but this is not usually done, there being few tenants and much land. The estate is divided into seven Pergunahs; but he posseses only one Pergunah in whole, of the others he has only portions. The measure differs in each, the largest being 125 cubits square, and the smallest 99. The latter is that used in Chandwe Pergunah, of which he possesses the whole, and the rates by which he lets the land there, are as follow:

		Customary bigah.		Calcutta bigah.	
Rice and sugar-cane land, best		anas 48	0	32	7
Do	2nd.	32	0	20	18
Do	3rd.	16	0	10	9
Do.	4th.	8	0	5	4½
Two crop land, best	- -	24	0	16	3½
Ditto, worst,	- -	8	0	5	4½
Wheat and barley, best	- -	12	0	7	16¾
Ditto, worst	- -	3	0	1	19½
Maruya, best	- -	6	0	3	18½
Ditto, worst	- -	3	0	1	19½
Mustard	- - -	12	0	7	16¾

These are the principal rates paid in money,* most kinds

* I have given this as one of many illustrations by the author of the various rents of land on one estate.—Ed.

of pulse pay a certain quantity of grain for each bigah, and a little is let by a division of the crops. On the whole, the great crop being rice, the rents should not be less on an average than 12 anas a Calcutta bigah. The Zemindar however pays for keeping the canals in repair. None of the rents are farmed; and, had the armed rabble been dismissed, Rupnarayan must have had the credit of being the best landlord as a manager in the district. His manner of living has no sort of splendour, but he is lavish to religious mendicants with whom the country, from being the route to Baidyanath and Jagannath, is dreadfully infested; but still he has probably large hidden treasures. It must be observed, that he pays 8,168 rs. a year for 633,000 bigahs of land capable of being ploughed, or 1 r. for 77½ bigahs; for I believe, that he is burthened with very little free land, except that assigned by himself for his establishment. Pergunah Kajra is a very fine estate, it contains 25,000 customary bigahs, and at least 20,000 of these are cultivated, being in the immediate neighbourhood of Suryagarha, where very considerable activity prevails.

The leases are usually for a short term of years, from four to seven, and the Zemindar alleges, that when a lease expires, he may increase the rent; but he seldom does so, because tenants are difficult to procure. The leases are given to one or two men in a manor (Mauza) with an &c., mention only the rates, and only what is cultivated pays rent. A few have leases for a certain farm without its extent being mentioned, but the amount of the rent is specified, a tenure which is here called Thikabandi. A few others have extent and rent defined, are called Mokurruri, and here are considered as perpetual. The rates, on what is paid by money rent, are fixed according to the value of the soil; which in some places is divided as far as 20 qualities, in others as far only as eight, and the rates are low; but this is of little consequence, as by far the greater part of the rents are collected by a division of the crop, and are therefore very high, when the Zemindar is not defrauded; but on such an extensive estate the frauds are enormous.

The village establishment is as follows: the estate is divided into Chuklahs, over each of which presides a Chaudhuri or Chuklahdar. Some of these are paid in land called

Nankar, and are besides allowed 3 per cent. on the rupee paid by the tenant. Others are allowed 2 anas on the rupee. In fact both pay annually a sum of money to the Raja, who thus keeps his accounts low. Under the Chuklahdars are Mokaddams or head men of manors, and Patwaris or clerks; but sometimes one Mokaddam has two clerks, and one clerk usually manages two or three manors (Mauzas). The Mokaddam takes from the tenant $\frac{1}{2}$ ana on the rupee of money rent, and 1 ser on the *man* of grain before division, or $\frac{1}{40}$ of the crop. Some of them have also free lands. The clerk is allowed half as much as the Mokaddam. Each is allowed a Tahalu or servant, who receives from 1 to 5 bigahs free of rent. For every two or three small manors there is a watchman (Pasban), and large manors have two or three. Their duty is to watch the villages by night, and to collect money in the day. From the Raja they are allowed from 4 to 7 bigahs each, and $\frac{1}{160}$ part of the grain before it is divided; and each tenant gives the watchman of his village $2\frac{1}{2}$ sers of grain. Almost the whole rents are farmed, which excites loud complaints.*

Pergunah Furrokhabad Serkar Orambar is not mentioned in the Ayeen Akbery. It belonged to the Register of ten-sixteenths of Bengal, and his representative still retains the property of all that is in this district amounting to about 100,000 customary bigahs (79 cubits square) of arable land. The estate is very fully occupied. One-fourth of the tenants have leases, in general such as are called Meyadi; but no term is stated in the lease, and the agents of the landlord say, that they may be turned out at will, the intention of the lease being merely to ascertain the rent that is to be paid during occupancy. The remaining tenants have no leases; but at the end of the year take a receipt (Farugkhut), for what they have paid, and it is understood, that next year no more

* In some parts of the country, a common part of the village establishment is a man to encourage the tenantry to work, or rather by repeated exhortations and dunning to compel them to labour. Their indolence, owing to too low rents, would render this a very useful service were it effectual; but I believe it does very little good, and the man is usually pacified by a little grain. When he has no other employment he is called Halsahana; but in general in order to give him more weight, this officer is also charged with collecting the rent, and is then called Dihidar.

rent can be demanded. The agents say, that Mr. Turner, when acting judge, determined these receipts to be of no avail, and that at the expiral of the year, the landlord might re-let his lands at whatever he could obtain. A contrary decision in a similar case, in the western part of the district has been given by the present judge. The law on this point would therefore seem to be rather uncertain. There can be no doubt, that the decision of Mr. Turner is most adapted for the benefit of the country.

The rent of one-fourth is fixed on the Hari or bigah, without reference to the crop. Some of this pays a commission, some does not. Where there is no commission, the tenant gets from 1 to 6 bigahs for the rupee, all tolerable land being above 10 anas for the bigah. Where the commission is taken, the rent is from 2 to 10 anas a bigah. The commission varies from 4 anas (Seway) to 2 rs. (Tetaki) on each rupee of rent. Three-fourths of the lands are let by a certain rate on the bigah, according to the crop with which it is sown; and part of this also is let without commission, part pays. When there is commission, ordinary farmers pay 2 rupees for each rupee rent, Mandals or managing tenants, pay 1 rupee on each rupee of rent, and the high castes pay ¼ rupee on each rupee. The following are the rates where commission is exacted.

	Rent.		Rent and Commission.					
			High Castes.		Mandals.		Farmers.	
	A.	G.	A.	G.	A.	G.	A.	G.
Rice and Mustard	5	10	6	17¼	11	0	16	10
Wheat, Barley, and China	4	10	5	12½	9	0	13	10
Sesamum and Linseed	4	0	5	0	8	0	12	0
Masur and Khesari	3	0	3	15	6	0	9	0
Sama, Kodo, and Kangui	2	10	3	2½	5	0	7	10

Very little produces two crops. All ranks pay house rent, in general very high, about 5 rs. a bigah; but the high castes pay only about half as much.

Agriculture of the Hill Tribes.—The southern tribe, in some respects, have made less progress than the northern; in other respects they have advanced farther. Their hills are cultivated with less care, neither do they rear cotton nor Cytisus Cajan, which are two of the most valuable crops that the northern tribe possesses; but many of them have adopted the plough, and use it not only to cultivate rice in low land, but

to cultivate swelling grounds at the bottom of their hills, after these have been enriched by a long fallow, and have been overgrown with trees. On both the hills and swelling lands, after two crops, the field is allowed to remain waste for from five to seven years, during which the trees shoot up to the size of large coppice. In Asharh and Sravan (14th June, 15th August), the men cut down all the trees on the space intended to be cultivated. In Chaitra and Vaisakh (13th March, 12th May), both men and women are employed burning the dry sticks. Then in the hills, with the early rains, the women chiefly dig small holes, at little distances, by means of a stick pointed with an iron about three fingers broad; and in each hole they put some seeds of Goronri (Maize), Jonola (Holcus Sorghum), and Kalai (the kind of pulse, which in the Hindi dialect is called Bora). They then sow the surface broad cast with two kinds of millet called Kheri and Kangni. Sometimes they reverse the progress, and sow the millet first. Next year they only plant the Maize and Sorghum, after which the field is allowed another fallow. On the swelling ground the field is slightly ploughed, and in the winter between the two crops rape-seed and Sesamum are sown broadcast. A field of this kind is called a Vari, and every other year the cultivators move their huts to the new field. These huts are very wretched, but have near them some plantains, capsicum, and vegetables. Part of their food consists of wild yams. The pulse is reared chiefly for market, to procure them a supply of salt, iron, clothes, and finery; but of the two last articles they procure very little. Their chief means, however, of procuring foreign articles is by making charcoal, which would afford them an ample supply, were they not totally abandoned to drunkenness; and in preparing drink consume a great part of their grain, so that the charcoal which they make is chiefly sold for rice.

The northern tribe is more industrious and sober, although both men and women often get very drunk. They cultivate the hills alone, and it is surprising what crops are produced on the steepest declivities, covered so thickly with loose stones that you can scarcely walk except by stepping from one to another. The field is cleared exactly in the same manner as among the southern tribe. On the two first years

it is planted with a variety of articles. Small holes, two or three fingers deep, are made in the interstices between the stones; and in each are dropt 10 or 12 seeds, taken by chance from a promiscuous mixture of the following articles. Maize, called by these people Tekalo, is in the greatest quantity, and is of two kinds, one gathered in Asharh (14th June, 14th July), the other in Aghan (15th November, 14th December). Naitu, a species of Holcus, called in the plains Gehungya Janera, is reaped in Paush (15th December, 12th January). The Kusora, the species of pulse called in the plains Bora, is reaped in Aghan (15th November, 14th December). The Kodom, or Eleusine Corocanus, which is of two kinds; one gathered in Bhadra (16th August, 15th September); the other in Aghan (15th November, 14th December). The Petaga or Panicum italicum, is gathered in Bhadra (16th August, 15th September). The smallest of these articles is the Lahari or Cytisus Cajan, which is of two kinds; one gathered in Paush (15th December, 12th January), the other in Chaitra (13th March, 11th April). Although the quantity of the last mentioned seed is comparatively small, it grows so luxuriantly, that, when I visited the hills, after all the other crops had been removed, no traces of them could be discovered, and the whole fields were covered with a rich close crop of this valuable pulse. On the third year the best fields are sown with cotton, and the poor are allowed to run wild, as is also done with the best, after the cotton has been removed, and the trees are allowed from 8 to 12 years to recover. I have nowhere seen more thriving fields of cotton, and have no doubt that its sale might procure an ample supply of all foreign commodities that these people want; but they exchange part of their grains for rice, and supply the lowlanders with timber and charcoal. The men cut down and burn the trees, make charcoal, and carry this and timber to market; but pass a great part of their time in hunting. The women sow and reap. Rich people occasionally hire the poor, and give a woman two paysas a day ($\frac{1}{32}$ part of a rupee) to plant; but she works only until noon. At harvest she works the whole day, and will bring home from 40 to 60 baskets of ears, each giving about 3 sers (104 s. w.) or 8 lbs. of grain: for her trouble she receives one basket.

CHAPTER VI.

STATE OF THE ARTS, MANUFACTURES AND COMMERCE IN BHAGULPOOR.

ARTS.—For an estimate of the number of artists, see Appendix.

Sculpture, statuary, and painting, are on as bad a footing as in the districts hitherto surveyed. The painters are employed as in Puraniya. Of music there is an extraordinary abundance. Mirasin, are a kind of dancing and musical girls, who perform before Muhammedan wómen of rank. They are confined to Rajmahal, where there are two sets, containing five girls. The common dancing girls, Bai, are much on the same footing as in Puraniya, but are rather inferior, and all profess the faith in Muhammed, except two sets, at Bhaghulpoor, of the kind called Rumzani. These happen to be the best in the district. In the southern part of the district, are a few sets of another kind of Hindu dancing girls, called Kheloni. They are exceeding bad dancers and singers, but endeavour to excite a laugh by some jokes suited to the capacity of the spectators, who are easily pleased. There are none of the sets of proper dancing boys (Bhaktiyas); but several boys dance and sing. Among these are the Jhumariyas. Each set consists of two or three men, who are musicians, that beat the drums called Tabla, and Mandira, and of two boys, who dance and sing dressed to represent Krishna, and Radha. The songs relate to the amours of these deities. These sets are employed at marriages, and receive about eight anas a day, and food. They are mostly weavers, and, when not employed in their musical profession, exercise the shuttle.

The Bhongrs are impudent fellows, who make wry faces, squeak like pigs, bark like dogs, and perform many other ludicrous feats. They also dance and sing, mimicking and turning into ridicule the dancing boys and girls, on whom they likewise pass many jokes, and are employed on great occasions. Of the Pirergayan, employed by the Moslems to sing

the praises of their saints, there is only one set. At Rajmahal, however, are ten houses of Piranis, the men, women, and children of which sing in honour of certain saints, whenever any one is afraid, and hire them to perform this kind of worship, which is performed in the houses of the Piranis. No woman who has any concern for her reputation, performs on any musical instrument; but women of some low tribes sing at marriages and festivals. There are a great many dissipated young men, who, in their cups, sing and beat on small drums; but men of rank and gravity totally reject such indecorous levity.

I heard of no persons who live by singing the praises of ancient heroes. The Daphalis are a kind of low Muhammedans, who beg on the strength of singing amorous ditties, accompanied by a tambourine. The Nariyals are men of the Goyala and Beldar tribes, who are employed to dance at marriages, and receive a share of the feast. The Bazigoors are jugglers, tumblers, and balancers, who amuse the people; and it must be remarked, that they have fixed their residence in the wildest parts of the country.* There they keep their children and old people, while some young men and girls stroll about the country, during the fair season. The girls are those who in common shew all the feats of activity, and often those of dexterity; but in the latter they are much inferior to strollers from Madras and Delhi, who sometimes visit the country. The Chambas amuse the populace with tame bears and monkies, and sometimes cut themselves before timid persons, in order to extort charity by compassion. One at Mungger, called a Gorajwaleh, procures money from such persons by threatening to run a spike into his breast. At Mungger, the people of one house live by making a coarse soap. The house contains four persons, men and women, who in eight days can make a batch. They take one *man* (84 s. w. the ser) of tallow (86¼ lb.) worth 5½ rs, and linseed oil 6¾ sers (14½ lb.) worth 1 r. They boil these in a large iron vessel for 4 days, adding to them gradually a ley, made by filtering water through 25 sers (53 lb. 14½ oz.) of quick lime, worth ½ r. mixed with 20 sers (43 lb. 2 oz.) of coarse carbonate of soda, worth 1 r. Then the vessel is exposed three days to the sun,

* They are the gipsies of the East.—[Ed.]

to dry. Next day, it is boiled again, and becomes thick, when it is made up into balls of from $\frac{1}{2}$ to 2 lb. weight. The materials cost 8 rs, the firewood costs 4 anas: the workmen procure $1\frac{3}{4}$ *mans* (150 lb.) of soap, worth 10 r. 11 a., so that their profit is 2 r. 7 a. They have a ready sale.

The barbers of the Bengalese part of the district, Napit, are as haughty as in other parts of that country; but the Nais of Behar are more condescending, and better operators. Among them are a few of the Muhammedan faith. They make good wages, and some, having acquired wealth, have become ashamed of their profession, and betaken themselves to the study of liberal sciences. In some parts there are a kind of surgeon barbers, called Jurrah.

In the Behar part of the district, bracelets (churi) of a coarse kind of glass called Kangch, are a good deal used. In my account of Mysore, I have given the process used. There are several kinds of Kangch. The cheapest and most easily made is black, and perfectly opaque. The workmen take 4 sers ($8\frac{664}{1000}$ lb.) of impure carbonate of soda (Sajimatti), and powder it. They then place it in the crucible of the furnace, and heat it for twelve hours, stirring it occasionally, until it melts. They then take it out with an iron ladle, and throw it into cold water. They then powder it again, and afterwards put it into the crucible. It melts in three or four hours; but is kept in this state all the day, and is frequently stirred with the ladle. In the evening it is taken out in ladlefuls, poured on the ground, and allowed to form cakes called Thaka. Next day, the cakes are put again into the crucible; and, when melted, are formed into rings, as I have described in my account of Mysore. The impure soda gives $\frac{1}{2}$ of its weight of glass.

The furnace is made of unbaked clay over a hemispherical hole, that serves for a fire place. The upper part of the furnace also is hemispherical, and within does not exceed a cubit in diameter. The crucible fills the whole space from side to side, so that the flame does not reach the materials which it contains, and only envelopes its bottom and sides. Four little walls on the outside, about four inches thick and six inches deep, strengthen the outer part of the furnace, dividing it into four spaces. At the bottom of one is a hole, through which the fuel is thrown into the fire-place; and the smoke comes out by another hole, which is formed at the

bottom of the opposite space. Above this is a large hole, by which the materials are introduced into the crucible; but this is afterwards shut by a plug of fresh kneaded clay, which can be removed to stir the materials or to take out the melted mass. At the two other sides, opposite to each other, are two apertures, through which the melted glass is taken with a rod to make the rings, a workman sitting at each. These always remain open.

Another kind of glass is greenish, and a little diaphanous. To make this the workmen take about 7 sers of the impure soda, and make it into a paste with a little water, forming it into cakes of about ¼ ser weight. These are put into the crucible, and in about 24 minutes become red. The fire is kept up until night, but is then allowed to go out. In the morning the cakes are taken out and powdered. The powder is then put into the crucible, before noon melts, and is taken out and thrown into water. The slag is then powdered and dried. Next day the powder is again put into the crucible, and melts before noon. It is stirred all day, and in the evening is taken out and poured on the ground to form cakes. If the last melting is continued long, the green colour is pale, and is called white; if continued for a shorter time, it is deeper, and is called green; but inclines to blue.

There is another green glass, of a bright grass colour *(Zumorrodi)* and more diaphanous. The process goes on as in the former case, until the materials have been thrown into water and powdered. To this powder is added $\frac{1}{16}$ of a black carburet, or, perhaps, merely a peroxide of copper, prepared as follows: take a quantity of copper, and make it into very thin plates; take a piece of moistened cotton cloth, cover it with turmeric made into a paste with water, and then sprinkle the surface with salt (muriate of soda); place on this the copper, cover this with salt, that with a paste of turmeric, and that with cloth; then heat them on the outside of the furnace for four or five days. During this the vegetable matters are reduced to charcoal and have penetrated the copper, which is then powdered and is quite black.

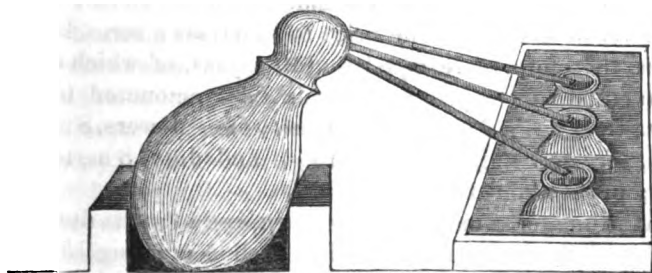
Another glass, of a bright deep blue *(Asmani)*, is made in the same manner, only the matter added is a metallic slag called Rung, which comes from the west of India, and sells at 2½ rs. a ser. It probably contains cobalt; but, previous

to being put with the other materials, is powdered with a little muriate of soda, and becomes black. The powder, when heated, emits copious fumes, but has neither the smell of arsenic nor sulphur; 3 sers of the powdered glass require 3 chhataks of the Rung, powdered with a little salt.

Another glass, of a brownish purple *(Uda)* colour, and somewhat diaphonous, is made by adding a stone called Sengr, which comes from the Ramgar hills, and sells at 1½ ana a ser. The stone is powdered, and about ¼ ser of this powder is mixed with 1 ser of the powdered glass, after it has been thrown into the water.

The workmen make also two enamels, that are applied to the surface of some of the rings. One is yellow, 5 chhataks of lead are melted in an oblong earthen shallow crucible. To this is added 1 chhatak of tin, and the alloy is calcined for between four and five hours. When calcined, and heated to redness, it is taken out, powdered, put into the crucible of the glass furnace, and heated to redness. Then is added a chhatak of powdered white quartz, and the mass is stirred about for three hours. It is then taken out with a ladle, poured on a smooth stone or iron, and cooled in water. The workmen, having melted one ser of the palest green glass, added ¼ ser of the above materials, which makes the yellow enamel. The green enamel is made in the same manner, only to the melted glass are added, not only the prepared lead and tin, but ¾ chhatak weight of the black powder of copper prepared as before mentioned. These glass rings are often coated with lac coloured gaudily, or ornamented with tin and copper foil.

The tanners, as usual, are of two kinds. Those who make shoes, ropes, drum-heads and saddles, and cover baskets, in the western parts are called Chamar, and in the eastern Muchi. Some at Mungger make very neat shoes, after the European fashion; and partly there, partly at Bhagulpoor, are about a dozen houses, the people of which make neater shoes of the native fashion than are made in any of the districts hitherto surveyed. Those in the villages, forming the great mass, live chiefly by making shoes and ropes for the farmers, and form a regular part of the village establishment. They are paid chiefly in grain, and each family may make 3 rs. a month. The good workmen in towns make 5 or 6 rs. a month.

The distillers are, in proportion to the population, more wealthy and numerous than in any of the districts hitherto surveyed; and they distil entirely from the Mahuya flowers *(Bassia)*. The dry flowers, with from equal to double quantities of water, are put in round earthen pots with rather narrow mouths, and exposed to the weather to ferment. This process is finished in from four to eight days, according to the heat of the weather. The whole fermented mass, flowers and water, is put into a still, and the spirit is drawn slowly off. It is never rectified, and after distillation is always very much diluted with water, owing to which it will not keep above 15 days, and it is best when fresh from the still. If rectified, or even if kept undiluted, it would preserve longer, but the customers would not have enough for their money. The dilution is usually a quantity of water equal to that of the spirit. The water is sometimes put into the recipient before the distillation commences, and at others is added when the operation has finished. The still is a large earthen pot, as here represented, placed, inclining a little to one side,

over a fire place, confined by two walls of clay. The head of the still is a small earthen pot inverted on the mouth of the larger, and luted with clay. Three tubes, more or less, of hollow bamboo pass from the head to an equal number of narrow mouthed unglazed earthen pots, that serve as recipients, and are placed in a shallow cistern containing water. A boy attends and pours water alternately over the pots.

The estimates of profit and loss, which I received, vary a good deal, as might be naturally expected. At Bangka, a man, who pays 8 anas duties a day, gave me the following account: 20 sers (80 s.w. a ser) of dried flowers are used daily. They are put into four pots, each containing 13 sers

of water. When fermented, they are distilled, one pot being drawn off at a time; of course the still is drawn off four times a day. At each time 5 sers of liquor is procured, that is 20 sers a day. To this he adds 30 sers of water, which gives 60 bottles of liquor. He sells the bottle for 2 paysas, so that the 60 bottles bring 1 r. 13 a. His monthly gain is therefore 54 r. 6 a. His expense is as follows: to 15 *mans* of flowers, 12 r.; firewood, 2 r. 13 a.; a servant's wages, 2 r.; pots, 15 a.; duty, 15 r.; total, 32 r. 12 a. Profit, 21 r. 10 a.

At Jamdaha, a distillery, which paid at the same rate of duty, uses a larger still; as, at each time it contains 10 sers of flowers; but then the owner distils only twice a day, and seems to draw off the spirit more slowly, and by this means brings over also more of the water, so that from the 20 sers of flowers, daily distilled, are obtained 32 sers of spirit, to which is added, an equal quantity of water, that renders it a very poor stuff. Although the owner thus procures 64 sers of liquor, he can only sell 56 sers, as every man who drinks, must be allowed more than the measure, for which he pays. The flowers, when I was at Jamdaha, having risen to 1 r. for 40 sers, he had raised the price to 2½ paysas a ser. His daily sales, therefore, were equal to 140 paysas, of which 68 were then equal to a rupee, so that his sales amounted to rather more than 2 r. a day. His expenses were—flowers, 8 a., wood, 5 g., servant, 1 a., pots, &c., 15 g., and duty, 8 a., total 1 r. 2 a.; profit about 14 anas a day.

At Mungger, a man who pays 5 rupees a day as duty, says that he daily draws off 14 stills, each containing 15 sers of flowers. If the best liquor is required, he only draws off 4 sers from each still; but what is in most common demand, is made as follows: 16 sers of cold water are put into the recipients, and the distillation is continued, until the liquor procured amounts to 28 sers; but these can only be sold for 24. The price, being ½ ana a ser, amounts to 12 anas for each still, or in all to 10½ rupees a day. The usual price of the flowers being 40 sers for the rupee, the expense will be as follows:—flowers, 5 r. 4 a., servants, 5 a., pots, 1 a., fuel, 7 a., and duty, 5 r., total, 11 r. 1 a.; so that he loses daily 9 anas: but this is quite absurd, more especially, as I am informed by one of them, that, besides the duties paid to government, it is customary to give a sum to the native officer, who superintends

this branch of revenue; and that last year, on this account, no less than 1500 rupees were given in Mungger. The other accounts are probable enough, as the profits mentioned would allow considerable deductions.

In Kalikapoor, one family prepares a fermented liquor (Pachoi) from grain, which is not distilled. The oilmakers are fully as poor as those of Puraniya. It is only at Mungger and Rajmahal, that a few have two mills, and many mills are provided with only one beast. About $\frac{10}{16}$ purchase the seed, and sell the oil, $\frac{6}{16}$ grind for hire. Except the mill and beast, with perhaps one or two rupees' worth of seed and oil, they have no capital. Some even have not a beast, but turn the mill with their own hands. The Dahiyars, who make curds and boiled butter, are numerous, and have more capital than those of Puraniya.

The Halwais, who prepare sweetmeats after the fashion of Hindustan, are numerous. They make also a small quantity of the sugar called Chini, which has been formerly described; and also some of a coarser kind called Shukkur, which is that most commonly used in this district; but I had no opportunity of learning the process.

Workers in more durable materials:—blacksmiths and carpenters are so intermixed, that it is with difficulty that they can be separated; for those who make the implements of husbandry, in some places are called Barhai, and in others Lohar. In some places the same persons make the whole implements of agriculture, wood and iron, and coarse work of both kinds; while in others the two professions are separate, although in general the people are considered as belonging to the same caste. These country tradesmen form a regular part of the manorial establishment, and are usually paid in grain for the implements of agriculture.

At Mungger and Bhagulpoor, are some workmen who make household furniture, superior to what is made in the districts hitherto surveyed; and these persons make a great deal after the European fashion, which they sell to passengers, and sometimes send to Calcutta. The articles chiefly made are chairs, stools, couches, and bedsteads; but they also make some tables, although the pieces of timber that are procurable are not of a sufficient size, and in order to form a leaf, must be joined. The furniture is neat and cheap. The

same people, if desired, will make palanquins and carriages, and when looked after, and furnished with sound materials, are clever workmen. There are at Bhagulpoor about thirty workshops, and at Mungger about forty. In each shop are from two to ten workmen. The master sometimes hires the workmen, and furnishes materials and implements. At other times, all the workmen are partners. Journeymen's wages are from 1½ to 2 anas a day. The carpenters of Mungger are the best, and chairs, stools, couches, and bedsteads may at all times be had ready made. At Bhagulpoor, well-finished work is seldom procurable, without being commissioned. Two or three shops in Gogri make the same kind of goods, and send them to Mungger for sale. Three houses in Bhagulpoor, and five at Mungger, have some stock, from 1 to 3000 rupees each.

At Mungger, are seven houses of Goyalas, or cow-herds, who, by a very curious process, make a yellow paint. Each house has from five to fifteen head of cattle, male or female. During the six months following the middle of November, these cattle are allowed to pasture only half the day, are then tied up, and supplied with mango leaves to eat, which the people say does them no harm. In the morning the men watch, and collect what urine the cattle void, and procure 4 or 5 sers (each 2 lb. 2½ oz.) It is boiled until it becomes thick, cooled, and strained through a cloth: what remains on the strainer, is the paint, which is called Piyuri, and is made into little balls. Some say, that the urine gives $\frac{1}{16}$ of its weight of the paint; others admit only of $\frac{3}{80}$, or even of $\frac{1}{40}$. Merchants make advances at the rate of 1 r. for from 1 to 1¼ ser. Each house makes from 3 to 4 *mans* a year, which, when dear, is to the value of from 120 to 160 r.; and, when cheap, from 96 to 128 r.

The potters, both at Rajmahal and Mungger, make some wares of a fine quality, especially a kind of bottles for holding water (Sorahi), which, being porous, render it cool. Those of Rajmahal are uncommonly light, and very porous, so that they look neat, and produce a considerable coolness. At Mungger, they make two kinds of these bottles; both are black. The one kind is small, and exceedingly light; but it is smoothed on the outside, and does not allow the water to evaporate freely, so that it produces little coolness. The

other is coarser and heavier; but allows more free evaporation. These bottles exactly resemble in shape the black guglets (Kuzah) of Calcutta, well known to almost every one who has visited India, as being sent from Calcutta to all parts frequented by Europeans. A potter of Mungger, who makes these bottles, and also implements for smoking tobacco, says, that he does not make common pots. He makes his ware of a smooth black clay, which he finds near Chandi-than. It contains no sand nor pebbles. He forms the ware on the wheel, as usual. The larger kind of bottles, when formed, have applied to their surface some of the fine river sand, which contains much mica. The smaller kind has a substance called Gabi applied. This Gabi is a red clay, found near Sitakunda, which is mixed with water, and forms a pigment, which is applied by means of a cloth. It is smoothed by rubbing it with oil. After drying for some days, the vessels are put in a small kiln, with alternate layers of fire-wood, and covered like a charcoal-maker's kiln, with earth. When the workmen think that the vessels are sufficiently baked, the rents in the covering are repaired, and some oil-cake is put into the kiln, which occasions a prodigious smoke, and stains the vessels black, nor does the smoke affect the water which is kept in these vessels. He says, that the people of Rajmahal make the smaller kind only; but make them red, white, and black. The red are merely made of the clay, without any coating, or without being smoked. The white, before being burned, are washed with a pigment of Khari, or porcelain clay. The black are made in the same manner as here, and do not cool the water so well as either the white or red. The art has been lately introduced at Mungger.

The Baruyi, who sell betle, prepare in general the lime that is used with that substance. In Behar, stone-lime, or a kind of potash, prepared from the bark of the Asan tree, are most commonly used; and it is almost alone in the parts south from Rajmahal, that shells are collected for the purpose. The seven houses of lime-makers in that part of the country, collect and burn these shells. The others are employed to burn stone-lime, of which I have given an account among the natural productions. At present, the calcareous nodules called Ghanggat, are almost alone selected, and the two chief places where these are burned, are Bhagulpoor and Sakarigali. At

the latter place, on an abrupt bank of the river, just above high water mark, there is a horizontal bed of clay, among which the calcareous nodules are thickly impacted. In the floods, the workmen occasionally dig into this; but with fear, as the bank has occasionally fallen, and proved fatal. They therefore do not work at that season, unless when the demand is very urgent. When the floods subside, a great abundance of the nodules is always found lying among the sand, under the bank. These might no doubt be then collected to serve the burners throughout the year; but such an expense of capital as would be required for the hire of the collectors, is very seldom incurred by the artists of India. At Sakarigali it is said, that there are only five houses of lime burners; but these are in fact merchants who perform no part of the work, and hire the neighbouring peasantry, and people of the hill tribes, so that from 2 to 300 people, men, women, and children, are often employed. They have seven battas, or kilns, sunk into the ground, and their sides secured with well-kneaded clay. They are circular, about 10 feet deep, 8 in diameter at the bottom, and 12 at the top. At equal distances round are 4 holes, which descend on the outer side of the clay to the bottom, and there pass through this wall, into the cavity of the kiln, and give an abundant supply of air: but, although the kilns have been built on a sloping ground, it has not entered into the imagination of the natives to make a passage, through which the burned lime might be drawn from the bottom of the kiln. Of course a great deal of very disagreeable labour and time is employed in taking it up into baskets. Billets of wood and calcareous nodules are thrown intermixed into the kiln, and, when it is filled, the wood is set on fire, and allowed to burn without covering up; nor are the natives in this operation at all aware of the advantages of a smothered heat, which have been so well illustrated by Buffon, in his valuable treatise on heat. The expense of fuel is therefore great, although the kilns are surrounded by woods that are free for the workmen, and the operation is imperfect. The following is a statement of the expense attending the burning of each kiln. To digging the sand to render the nodules accessible, 40 days' labour, 2 r. 8 a.; to 250 days' labour of men, women, and children, at from 1½ to 4 pan of cowries, according to age and sex, employed to collect the

nodules, 9 r.; fire-wood furnished by contract with the hill people, 20 r.; 25 days' labour to remove and slake the lime, 1 r. 9 a.; 50 days' labour to separate the ill-burned pieces from the powder, 3 r. 2 a.; total, 36 r. 3 a. Each kiln gives from 4 to 500 *mans* (92 s. w. a ser), each weighing almost 94½ lbs., for which the merchant or burner is paid at the rate of 12 r. for the 100 *mans*. The average value of the lime of each kiln is 54 r. leaving a profit of 17 r. 13 a., or in the medium of years about 80 r. a year for each kiln. Out of this the merchants have to pay 10 r. for rent. None is ever made without the whole price having been previously advanced, and the burners very seldom fully complete their engagements, or are able to refund the balance. At Bhagulpoor, are 15 houses of lime-burners, but on a much smaller scale, as they are the actual labourers, and do not hire in assistants.

Stone cutters are here more numerous than in the districts formerly surveyed; because there are several quarries. In the account of the natural productions, I have mentioned these quarries, and have given some account of the imperfect manner in which they are wrought. The workmen very seldom give themselves the trouble to split the entire rock. As much as possible they endeavour to find among detached masses those of a size that will suit their purpose; and, where these cannot be had, they take advantage of natural fissures in the more decayed parts of the rock, and remove masses by means of iron crows. Their operations are now entirely confined to hornblende, or indurated potstone, and to milstones: but traces remain to show, that granite has been formerly wrought, and the blocks have been separated by wedges, exactly as I have described in my account of Mysore. The present workmen could cut granite square with the chisel; but they are totally unable to give it a marble polish; nor could I procure one, that could do this even to calcareous marble. They only attempt to polish the hornblende, and this does not take a finer surface than that of a writing slate. The workmen of Bhagulpoor have for some years been chiefly employed in the Jain temple of Champanagar. Those of Ratnagunj make only stones for hand-mills. Those of Mallepoor chiefly quarry milstones and hornstone, and form these materials into rude blocks, which are afterwards finished at Mungger. Plates, cups, mortars, and weights are made,

for common sale, of the hornblende, or bornblende slate, and images of Siva, when commissioned, are made of the former. The workmanship of these images is fortunately so rude, that they convey very little idea of the indecencies which they are intended to represent. The cups and plates are heavy, and are not turned in the lathe; but they are cut with an exactness, that is surprising, and which I should have thought impracticable except by turning: and I have no doubt, that these workmen are capable of executing with great neatness any design that could be given to them.

The white aggregate rock of Laheta is made into the stones of hand-mills, and those for rubbing sandal and curry stuff. Two of the houses at Mungger are rich, having a stock of about 1000 rupees. In general the stone cutters make good wages; and, when they have no employment in making new goods, they are sure of finding work by going round to pick the old mill-stones that have become too smooth.

The small number of goldsmiths that is to be found in most parts of the district, will show the small extent that has been made in the luxury, to which the women of India are most addicted, that is, the having many ornaments of gold and silver. In Mungger, however, the number of workmen is great, and the brides, from far and near, go there to be equipped. Some of them are exceedingly neat workmen, and make plate almost as neatly as could be done in Calcutta. These make very high wages, 8 anas a day; but many in the district do not get above $\frac{1}{2}$ of that sum. None of them have any capital, nor make goods for sale; as no native would trust bullion in their hands, nor to their making it up without adulteration.

Very few vessels of copper, brass, or bell metal are made in this district, and the workmen are chiefly employed to mend those imported from Moorshedabad, and to make female ornaments. In some places these two professions are considered as distinct, the makers or menders of vessels being called Kasera, and the makers of ornaments being called Thahtera; but in others the terms are used as synonymous. All here are poor.

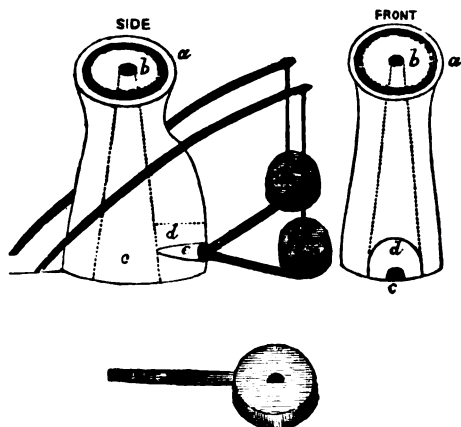
The Rangdhaluyas or Ranggarhuyas work in tin and pewter (Justah), making ornaments for women, and tin leaf. A man takes one ser of tin worth 1 r.; $\frac{1}{2}$ ser of lead worth 4 anas; $\frac{5}{4}$ anas worth of oil, which is put on the metals, while

in fusion, to prevent calcination; $2\frac{1}{2}$ gandas worth of borax, used in soldering; and requires 4 anas worth of charcoal: the whole cost is therefore 1 r. 5 anas, $7\frac{1}{2}$ gs. He procures $1\frac{1}{16}$ ser of pewter; for which the natives here have no appropriate name. In five days a man makes this quantity into rings, bracelets and other ornaments, and his wife sells the work for 2 rs.

I have already had occasion to notice, that in some parts of the district the profession of blacksmith and carpenter are united in the same persons. In other parts again they are separated, and I have mentioned that those of both classes who are employed in making the implements of agriculture are usually paid for their labour in grain, and are often entitled to a certain share of the crop, forming a regular part of the establishment on each estate. From among those who labour at the anvil alone, I must notice two classes who do not belong to the manorial establishment; one of them in the forests forges the crude iron, as it comes from the smelters; the other in towns, make the finer kinds of goods. Before proceeding to mention these, however, I must give an account of those who smelt the iron, who in general, however, work part of the year in cultivating the ground.

In my account of the natural productions, I have mentioned the very imperfect skill which the people of this district have in working their mines of iron; and the defects in the manipulation necessary to fit the ore for the furnace. The heat of the furnace is so trifling, that it cannot vitrify the stony particles of the ore, which consequently must be reduced to a coarse powder to separate these particles by winnowing. Having no means of performing this operation, except by beating the ore with a stick, wherever it is found in solid masses, it is considered as useless. The same people mine, prepare charcoal, and smelt, so that no estimate can be formed of the expence of the different parts of the process; and, being very ignorant timid creatures, very little reliance can be placed on the accuracy of such information as they gave; nor can we form any judgment concerning the nature or richness of the ore from their operations, as they never have weighed nor measured either the ore that goes to the furnace or the masses of crude iron that come from it.

The furnace consists entirely of kneaded clay, and is about

$3\frac{1}{2}$ feet high. The upper extremity (see annexed drawing) is round, and about 18 inches in diameter. It is slightly

concave, and in its centre is a hole (*b*) about 2 inches wide, which descends gradually, widening to the ground (*c*), where it may be from 9 inches to a foot in diameter. Under the top the furnace contracts a little, and then it swells out like a bottle; but very little only towards the back and sides, and a good deal towards the front, in the bottom of which there is a semicircular opening (*d*) which communicates with the inner cavity of the furnace (*b,c*). In this opening is laid a pipe of baked clay (*e*), which receives the muzzles of the bellows; and, when going to work, the opening round the pipe is covered with kneaded clay. Some charcoal is put in the furnace, and having been kindled, the bellows are applied. The cavity on the top of the furnace is then covered with charcoal, and as this kindles, some of the prepared ore is thrown on it, and thrust into the hole, as the fuel below is consumed. This is repeated until the whole ore intended for the smelting has fallen through the aperture; and the fire is kept up until the workmen judge that the operation is complete. The clay and pipe are then removed from the front of the furnace, the mass of iron is taken out, while yet hot is cut in two, and is then cooled in mud, a good deal of which penetrates its pores, and adds to the weight. In this state it is always sold. Some of the smelters allege, that in each furnace they always add a quantity of iron dross, that is

procured in forging the crude iron; while others allege, that they use ore alone; and I have heard it asserted, that the best iron is made entirely by smelting this dross, without any addition of new ore; while finally some of the forgers assured me that the dross was totally useless. I cannot take upon myself to reconcile such discordances; but I saw some iron smelted, in which the dross was added, some in which the ore alone was used; and near some of the forging furnaces I saw lying a quantity of the dross, which no one, I was told, thought it worth his while to remove. The bellows are the most ingenious part of the apparatus. Each consists of a cylinder of wood, about 18 inches in diameter, and 6 inches high. This is hollowed, so as to leave thin edges, and a thin bottom. The top is covered with a hide, tied firmly round the mouth of the wooden vessel; but the skin is not tight like a drum; on the contrary it may be drawn up or pushed down to a considerable extent. In its centre is a hole about an inch in diameter, through which is passed a wooden button, that holds a string tied to the end of a bamboo, fixed like the spring of a turner's lathe. When at rest, the spring raises the skin, so that its upper surface is a hemisphere. The muzzle of the bellows a bamboo, about 4 feet long, which passes through a hole in the side of the wooden cylinder. Two of these bellows are placed close to each other. The workman, who is to blow with them, puts his heel first on the hole in one skin, and depresses it, expelling the wind by the muzzle; he then puts his other heel on the other hole, and thus, treading alternately on the two cylinders, expels the wind, while the spring raises the hide, when he lifts one of his feet to throw the whole of his weight on the other. When it is wanted to increase the power, another workman stands behind, and both tread at the same time. This gives as much wind as the bellows of one of our blacksmith's forges, but with a very severe labour. During this operation the mass of metal would not appear to be ever melted, it is only so far softened, that the particles cohere in a slaggy porous mass.

In Bangka, where 150 of the smelters reside, it was alleged by themselves, that they only smelted five months in the year, and that they wrought in their farms, and in collecting Mahuya flowers for the remainder, except during the two

months of marriage feasts, when very little work is done in that part of the country. Other people however said, that on an average they wrought 20 days a month, throughout the year, and on an average a family, of one man, his wife, and a boy or girl able to assist in collecting ore, can smelt twice a day, procuring daily about 5 sers of 36 paysas or 72 s. w. ($9\frac{1}{4}$ lbs. or more exactly $9\frac{24}{100}$) of iron, which they exchange usually for $7\frac{1}{2}$ sers (80 s. w., or $15\frac{4}{10}$ lbs.) of rice, but when I visited the place, they procured only 5 sers of that grain. As they are most notorious drunkards, although in other respects they live very poorly, we cannot allow that they make less. Each family therefore makes in the year about 30 *mans* of crude iron, or in all 4500 *mans* (about 2970 cwt.), and 2000 *mans* (about 1170 cwt.) of forged iron (64 s. w. a ser) are said to be exported, which confirms the above calculation. Twenty-five traders advance grain to these smelters (Kol), and sell this crude iron, called Bhinda, to the forgers at from 1 to $1\frac{1}{2}$ r. a *man* (the ser 64 s. w.) equal to nearly $65\frac{7}{10}$ lbs. The accounts in Tarapoor did not differ very materially, and there being in that district 100 families, they will make annually about 3000 *mans* of crude iron. In Lakardewani the smelters only allowed 12 *mans* of iron for each family; but little reliance can be placed on what they said; nor can it be conceived that they make less than their neighbours; so that, there being 70 houses, the crude iron annually made will be 2100 *mans*. In the whole district we must therefore allow the annual produce of crude iron to be 9600 *mans* or 6336 cwt. A family can make about $2\frac{3}{4}$ rs. a month, and cultivate 4 or 5 bigahs of high land. Each pays from 1 to $1\frac{1}{4}$ r. as rent for ore and charcoal, and about 12 anas for the fields, which are generally cultivated for a few years, and then fallowed, as the smelters often move in search of ore.

The iron of Kharakpoor is reckoned the best that comes to Mungger; and greatly superior to that of Virbhum, or Ramgar. It is forged into various forms. That intended for plough shares (Phal) is the highest priced, selling at Mungger for about 6 sers (84 s. w.) almost 13 lbs. for the rupee. It comes nearly fitted for putting in the plough. That intended to be wrought again is in larger masses, capable each of making a hoe, hatchet, or some other instrument, from whence it derives various names, and sells at about 8 sers or $17\frac{1}{4}$ lbs.

for the rupee. In working into coarse goods it looses one-third, and wrought into fine goods it looses one-half.

Some blacksmiths do nothing else but forge the crude iron, while others employ part of their time in making the implements of agriculture, and coarse utensils used in the country. They all reside near the mines, and the crude iron is never sent to a distance for market. Five or six men are employed at each forge (Maruya), which does not differ much from a common Indian blacksmith's; nor is it requisite to strike the iron with a larger hammer than that which an European blacksmith's assistant commonly wields, weighing perhaps four or five pounds. The crude iron is heated and hammered three or four times, and is then fit for sale, being formed into little wedges, bars, or plates, according to the various purposes for which it is intended. Each man, it was said, could make two anas a day; but they would give me no estimate of the quantity of forged iron procured from a given quantity of crude iron, on which I could place reliance. In some places they stated, that the forged iron was $\frac{8}{30}$ of the crude, in others $\frac{14}{40}$, and there is no doubt that the loss is very great, as I evidently saw during the operation, but the above mentioned loss is certainly exaggerated. The statement, on which I can most depend, was procured at Bangka. A forge, with six men, makes daily 10 sers (64 s. w. = $1\frac{6426}{10000}$ lb.) of each three kinds of iron; one fitted for plough-shares, one for hoes, and one for hatchets. Ninety sers of crude iron worth 3 rs. give 40 sers of the forged worth, at the advance price, $4\frac{1}{2}$ rs.; and to forge this quantity requires $7\frac{1}{2}$ anas worth of charcoal. Each man therefore makes 2 anas $1\frac{1}{4}$ ganda a day. The $\frac{1}{4}$ ganda may be allowed for the expence of implements, &c. They never work but when they receive advances. Merchants usually sell them the crude iron, and purchase the forged, so soon as made.

The blacksmiths who are employed in making finer goods, in general work for the use of the natives, making spears, swords, matchlocks, and a rude kind of cutlery. Some of them however at Bhagulpoor and Tarapoor are good workmen, and capable of making anything, for which there is a demand. At Mungger are about 40 houses of blacksmiths, who chiefly make goods after the European fashion, very coarse indeed when compared with English work, but cheap

and useful. The following is a list of the articles made, with the most common rates of their value :*

Double-barrel guns, 32rs.; rifles, 30rs.; single-barrel fowling pieces, 18rs.; muskets (Atmanari), 8rs.; Krabin (blunderbuss), 25rs.; ordinary match-lock pieces, 4rs.; carved ditto, 6rs.; pistols single-barrel, 10rs.; ditto double-barrel, 20 rs; tea-kettles (Mug) 12 anas; ditto (Sada) 8 anas; *fish-kettles, 30in. long, and 18in. wide and deep, 45; *iron ovens, 16rs; sauce-pans, from ½ to 3rs.; frying-pans, from 1 to 3rs.; snuffers, from ½ to 3rs.; *iron cullenders, 2rs.; chafing irons, square (Chauka Anggethi), 6rs.; ditto, round (Gol Anggethi), 2rs.; ditto, high (Ukhriwala Anggethi), 6rs. 16 anas; *chamber stoves (Dhungya kush), or grates, 125 rs.; kitchen stoves (Drajwala Anggethi) 15rs.; ladles, from ½ to 2½ anas; ramrods, from ½ to 1r.; swords, from 1 to 3rs.; spears, from ¾ to 2 rs. 8 anas; table knives and forks, per doz. 6rs.; breakfast ditto, ditto, 4rs.; scissors, 4 anas; Sarota or betle-nut cutters, 2 to 6 anas; Hindustani bits for bridles, 4 anas; ditto stirrup-irons, 6 anas; horse shoes and hob nails, per ser, 6 anas 8 pice; Hindustani spurs, per pair, 12 anas; small hatchet (Tanggari), 1r.; hatchets (Kurali), ¾ to 1r.; hoes, 12 anas; *padlocks, chest locks and door locks, ½ to 1r.; *hinges, ½ to 5rs.; clamps for boat building, per ser, 5 1-3 anas; nails for clinker-built boats, per ser, 5 1-3 anas; nails, common, do. 5 1-3 anas; curry-combs (Kharara), 2 to 4 anas; sickles, without teeth (Hangsuya), 1½ to 3 anas; shovels for cutting grass roots for horses, 2 to 4 anas; large sickles for cutting grass, 4 anas; sickles, with teeth, 1 ana; *palanquin and cast furniture; cork-screws, 4 to 8 anas; razors, 4 anas; tongs, 1 to 2 anas; rod for cleaning the implement used in smoking, ½ ana; coarse needles, per 100, 3 anas; Takuya or wheel spindles, per 100, 1 r. 8 anas.†

The chief articles are the different kinds of fire-arms, mostly sold to passengers, and carried towards the west; and tea-kettles and chafing dishes sent to Calcutta. In each shop are two or three men, generally partners or persons of the same family. When any man gets a large commission, he hires in his neighbours. A common labourer gets 2 anas a day, a clever workman is allowed 3. The barrels of the fire-arms are made by twisting a rod round an iron spindle, and then hammering it together. The bore is afterwards polished and enlarged by borers of different sizes. The tea-kettles are made in sundry pieces united by solder, which is a loss, as the solder being copper is dangerous; and they ought therefore to be tinned when used. The workmen have adopted the European bellows. These improvements were

* Mungger (Monghir) is the Birmingham of the East.

† Those marked thus * are only made when bespoken.

introduced by the Europeans of the regiments formerly in garrison.

At Mungger is a house of Koftgurs, who plate iron tea kettles, and inlay gun barrels, sword blades or spears with gold or silver. At Bhagulpoor are two houses of needle makers, who live entirely by this profession. They have not yet acquired the art of forming the eye after the European manner; but merely make a hole through the thick end, so that the thread passes with difficulty through the cloth.

Cloth Manufacture.—All castes are here permitted to spin, and near the Ganges, everywhere except in Rajmahal, it was stated, that a large proportion of the women spin cotton, some all day but most only for a part; and this is an employment suited well to the jealousy of the men. In Rajmahal, owing probably to dissipation, and in the forests owing to rudeness, the women spin very little. The whole spun is very coarse, and is done by means of the small wheel. The number of women on the whole was estimated at about 160,000. But by taking an average of the various reports of the quantity of cotton required, of the thread spun, and of the value of each, it would appear that every woman, one with another, spins annually 16 sers 12½ Chhs. of cotton wool (34 lbs. 7⅓ oz.), worth 6 rs. 9¼ anas, and makes thread to the value of 11 rs. 1½ ana, having a profit of 4 rs. 8¼ anas. Women who spin constantly of course make more, and many, who are much otherwise employed, make less. This statement, so far as it relates to the quantity and profit belonging to each woman, seems pretty accurate; but the total number of women said to spin, can by no means be reconciled with the quantity of raw materials said to be used. It was said, the cotton wool imported amounts annually to about the value of 276,000 rs. which sold by retail, and fitted for spinning, will amount to 345,000 rs.; and what grows in the country, including that reared on the hills, may be about the value by retail of 125,000 rs. These, according to the above calculation, would only employ 71,450 women, who would make thread to the value of about 792,600 rs. About 198,000 rs. worth of this will be required for mixed cloth, carpets, sewing, &c., the remainder, according to the average of estimates received, would make about 832,000 rs. of cloth.

The dyers in most parts of the district are chiefly employed

to dye the clothes of those who attend marriage parties, that are exceedingly numerous; and during the three months which the ceremonies last, the dyers make very high wages; but at other times they have little employment. They dye chiefly with the safflower, with which they give two colours, Kusami a bright pomegranate red, and Golabi a pale but fine red like the rose; and each colour is of two different shades. They also dye with indigo, but blue is not in much demand; and with the flowers of the Tungd and Singgarhar. As the dying cotton with safflower, and the other flowers is much practised at Mungger, I shall give an account of the processes as they were performed before me. The safflower, *Carthamus tinctorius* or Kusam, is in most demand.

In order to dye the pomegranate red (Sorukh or Kusami), for three turbans 40 cubits long by 1 wide, take of the flowers 3 sers (84 s. w.) or 6 lbs. 7½ oz. value 1 r.; of impure carbonate of soda (Saji), 6 Chhataks, almost 13 oz., value ½ ana; of turmeric 1 Chhatak, 2⅛ oz., value ¾ ana; of any vegetable acid, lime juice, mango, or tamarind, to the value of ¾ ana. Wash the flowers on a cloth strainer with six pots of water, each containing about 15 sers (32 lbs. 5½ oz.), until the water comes off clear. This water is called Pili, and is used in dying green with turmeric and indigo. In about an hour after, wash the same flowers with another six pots of water. This water is called Dohol, and is of no use. Then squeeze the water from the flowers, add the soda, and rub them together. Then place them on the strainer, and with 1 or 1¼ pot of water wash out the colour, which is called Sahab, and is the proper dye. In this dip the three turbans, and knead them in the dye. Then take out the cloth, and add the turmeric and acid; then put in the cloth again, and having soaked it, wring, and dry it in the shade. The same operation is repeated with fresh flowers, on the two following days. If the colour is wanted lighter, a little more water is added to the Sahab; and if a bad cheap colour is wanted, give the cloth only one or two dips instead of three.

The best Golabi or rose colour is given thus. After having extracted the Sahab colour as above, the dyer adds to the same flowers another pot of water, which extracts a colour called Pachuya, that dyes four turbans of the same size. They are first dipped in the dye, then taken out and

an acid added, and then dipped again and dried in the sun. Each turban brings to the dyer 2 anas, and the acid costs $\frac{3}{4}$. A paler rose colour is given by taking $\frac{1}{4}$ ser of the Sahab colour, adding 5 sers of water, and using this dye as the other. The dying three turbans of a bright pomegranate brings the dyer 4 r. 8 a., and the four turbans of a rose colour brings 8 anas, in all 5 r. The cost is 3 r. 6$\frac{3}{4}$.

Naranggi, or orange colour, and Zurd, or yellow, may be given either with the flowers of the Singgarhar or of the Tungd, both nearly of the same quality, and used in the same manner; but each turban requires 4 chhataks (8$\frac{2}{3}$ oz.) of the former, while 6 chhataks (13 oz.) of the latter are necessary. The flowers are boiled in 3 sers (each 2lb. 2$\frac{1}{2}$ oz.) of water to 2 sers. When cooled, add 1$\frac{1}{2}$ ser of the Sahab colour, prepared as above from Safflower, and 1 ser of water. In this dip the cloth, wring it, add some vegetable acid, and soak the turban in the mixture for 24 minutes; then wring and dry it in the shade. This makes an orange of different shades according to the quantity of cold water added. Each turban pays for dying 4 anas. The yellow colour is given in the same manner, only that no Sahab is added, and that in place of acid 1 chhatak of alum, worth $\frac{1}{2}$ ana, is employed. The flowers are boiled with 4 sers of water to 3 sers. If a light yellow is wanted, a little cold water is added to the dye when cool.

The dyers of Bhagulpoor partly give the same colours; but about 12 houses are constantly employed in dying the mixed cloth made of cotton and Tasar silk, which is woven in the vicinity of that town. These dyers give a colour to pieces that are of an uniform colour (*Baftahs*), and that are dyed after having been woven. I saw 10 colours dyed by the following processes.*

1st. Kakreja, a dark brown inclining to purple. Take 25 s.w. Tairi (pods of the Cæsalpinia), bruise and infuse it in 5 sers of water for 4 ghuris. Then strain off the water and soak the cloth in it. Then dissolve 3$\frac{1}{2}$ s.w. of Kusis (a sulphate of iron become white and powdery by exposure to air) in 5 sers of water, and put the cloth in it a few minutes; wring,

* The Indian dyes are excellent and permanent.—[Ed.]

and dry it in the sun. Then dissolve 3⅛ s.w. of alum in a little hot water, add it to 5 sers of cold, and in this soak the cloth. Then boil 12½ s.w. of Sappan wood in 15 sers of water for six hours, cool the decoction and soak the cloth in it for one ghari. Then wring, and add to the same colour 6¼ s.w. of lime, stir this about, and put in the cloth again. Then wring and dry in the shade.

2nd. Agari, a brown without any tinge of purple. Take 50 s.w. of bruised Tairi; infuse in 5 sers of water for about 3 gharis, soak the cloth in the infusion, and wring and dry it in the sun. Dissolve 6¼ s.w. of Kusis in 5 sers of water, and rub the cloth in the solution for about 1 ghari. Then infuse 18¾ s.w. of terra japonica *(Kath)* in 5 sers of cold water, add a little lime water, and stir the infusion. Then dip into it the cloth, wring, and dry it in the sun.

3rd. Uda, a bright purplish brown. Infuse 25 s.w. of Tairi in 5 sers of water, and soak in it the cloth, wring it, and dry in the sun. Dissolve 6¼ s.w. of Kusis, and use it as in the former operations. Then soak the cloth in the solution of alum, such as first used in the first operation. Then soak it for one ghari in a decoction of 50 s.w. of Sappan wood, boiled for 15 gharis in 20 sers of water, which will be reduced to 14 sers. Afterwards to a part of the decoction add a little lime water, put in this the cloth, and dry it in the shade.

4th. The Baygani, a colour rather lighter than the above, approaching to Claret colour. Soak the cloth in the infusion of Tairi, as above. Then put it in a solution of Kusis, and dry it in the shade. Then soak it in a solution of alum, to which some lime has been added. Then boil 12½ s.w. of Sappan wood in 5 sers of water for six hours; when cool, soak the cloth in the decoction, and wring; then add a little lime to the same decoction, put the cloth in this, wring and dry in the shade. If the colour is not full, put it again into the decoction of Sappan.

5th. Habasi, a blood red. Soak the cloth, as before, in the infusion of Tairi, and put it in a solution of 6½ s.w. of alum. Then boil 25 s.w. of Sappan wood for 15 gharis, in 10 sers of water. Cool the decoction and add 25 s.w. of lime water. In this put the cloth, wring, and dry it in the shade.

6th. Shotari, a light brownish drab colour. Take 12½ s. w.

of terra japonica, and infuse it a whole day in ½ ser water. Next day add 4 sers of water and soak in it the cloth. Then put this in a solution of 6¼ s.w. of Kusis in 5 sers of water. Then wring and dry in the sun.

7th. Torunji, a bright gamboge yellow. Infuse 12½ s.w. of turmeric in 5 sers of cold water, and strain the infusion. Put in this the cloth. Then put it in a solution of 6¼ s.w. of alum in 5 sers of water, to which has been added 50 s.w. of sour curdled milk. Then dry the cloth in the shade.

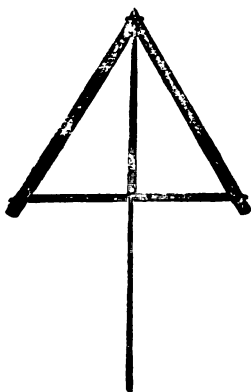
8th. Asmani, a light sky blue. Take 3⅛ s.w. of native indigo infused in 5 sers water, and soak in it the cloth, rubbing it well. Then add to the indigo water 3⅛ s.w. of alum dissolved in a little water, and 25 s.w. of milk, and rub the cloth again in the mixture. Wring and dry it in the sun.

9th. Fakhtah, a bluish ash colour. Put the cloth in an infusion of 50 s.w. of Tairi in 5 sers. of water. Then in a solution of 6¼ s.w. of Kusis in 5 sers of water. Dry in the sun, and take 6¼ s.w. of Kachur root (a scitamineous plant mentioned in my account of Puraniya) powdered, and infuse it in 5 sers of water. Put the cloth into this, and dry in the sun.

10th. Shishaha, a pale blue compared to lead, but very different. Proceed as in dying Fakhtah, but the cloth, after being taken from the infusion of Kachur, is put into an infusion of 12½ s.w. of country indigo in 5 sers of water, and dried in the sun. It may be also made by omitting the Kachur infusion. In the whole of these processes the dyers use well water alone, and most of that near Bhagulpoor is hard. The sicca weight is rather more than 179½ grain apothecaries weight; and the ser contains 100 sicca weight, or 2lb. 9oz. avoirdupois weight. 2½ gharis are equal to 1 European hour.

Of the weavers who work in Tasar silk, a few weave cloth entirely of that material, but the quantity is so trifling that I shall take no farther notice of it, and confine myself to detail the accounts of the mixed cloth called Bhagulpuri, because almost the whole of it is woven in the vicinity of that town; for out of 3275 looms, stated to be in the district, 3000 of these were said to be in the Kotwali division. The women of the weavers mostly wind the thread, although the men sometimes assist. These people are so timid, that no great reliance can be placed on what they say; but I shall mention

what was stated by two men that came to me at Mungger from Bhagulpoor.

A woman takes five *pans* of Cocoons (405), and puts them in a large earthen pot with 600 sicca weight of water, a small mat being placed in the bottom to prevent the cocoons from being burned. A small quantity of pot ash, tied in a bit of cloth, is put into the pot, along with the cocoons, which are boiled for about an European hour. They are then cooled, the water is changed, and they are again boiled. The water is poured off, and the cocoons are put into another pot, where they stand three days in the sun covered with a cloth to exclude insects. On the 4th day they are again boiled, with 200 sicca weight of water, for rather less than an hour, and then poured into a basket, where they are allowed to cool, after which they are washed in cold water, and placed, to dry on a layer of cow-dung ashes, where they remain spread, and covered with a cloth, for six hours. The woman then picks out such cocoons, as are not quite ready for winding, and exposes them for a day or two to the sun, which completes the operation. The outer filaments of the cocoon are then picked off, and form a substance called Jhuri, of which the potters make brushes used for applying a pigment to their vessels. The fibres from 4 or 5 cocoons are then wound off on a miserable conical reel (see annexed drawing), which is twirled

round by one hand, while the thread is twisted on the thigh, the cocoons adjusted, and the broken fibres joined by the other. The cocoons, while winding, are not placed in water.

This thread is called Lak, and after the Lak has been removed, there remains another inferior kind of filament, called also Jhuri, which is wound off, and is purchased by those, who knit strings. Even the cocoons, that have been burst by the moth, are wound off; but owing to the frequent joinings give a weaker silk. When the Tasar is neither very high nor very low, that is, when 405 cocoons cost a rupee at Bhagulpoor, a woman boils and winds this number in 10 days. She will obtain from 16 to 18 Paysa weight (58=100 sicca weight) of the good thread, which sells at 9½ Paysas for the rupee. She gets besides 2½ Paysas weight of the inner bad thread called Jhuri, which sells for ½ ana. In a month, therefore she might wind 1215 cocoons, worth 3 Rs. and would procure about 51 Paysa weight (lb. $2\frac{257}{1000}$) of fine thread worth 5 rs. 6 as. and 1½ ana worth of refuse (Jhuri), so that her profit would be 2 rs. 7½ as. a month, but pots, fire-wood, and unavoidable interruptions necessarily make some reductions; and my informants say, that the women in fact make only from 1½ to 1¾ rs. a month. It is only however, when the cocoons are about a medium price, that they have this great advantage. When the raw material is too cheap, it is not saleable; when scarce, all cannot procure work. The estimate is also made on the supposition, that one half of the cocoons wound is of the kind called Dhaba; and the remainder of the kind called Sarihan; the former winds easily, but sells cheap, being coarse; the latter is wound with difficulty, but the finest goods are woven of it alone. Setting aside the refuse as a trifle, every rupee worth of the raw material, when the price is reasonable, will give 17-9½ rs. worth of thread or 100 will give nearly 179, or the spinner has 79 per cent. for her trouble. The medium price of the 2 kinds of thread, at 9½ Paysas for the rupee, will be for the pound avoirdupois about 2rs. 6 as.

The kinds of cloth, most usually made, are as follows:—

1st. Duriyas, the warp consists of three parts of cotton, and two parts of Tasar of different colours. The woof is all cotton of one colour, so that the cloth is striped lengthways, and is dyed entirely by the weavers in the thread. The pieces are most usually from 20 to 22 cubits long by 1½ broad, and on an average sell at 42 anas. The cotton thread costs

22 anas, the tasar $10\frac{1}{2}$ anas. A man can weave monthly $7\frac{1}{2}$ pieces.

2nd. Namunahs are pieces from 20 to 22 cubits long and $1\frac{3}{4}$ broad; the most common price is 44 anas. The warp contains about 35 parts of cotton thread, and 21 of tasar, disposed in stripes of a different pattern from those of the Duriya. The woof is all cotton. The cotton costs 21 anas, the tasar 14 anas. The dying is done by the weaver, the drugs costing one ana. The loom makes seven pieces a month.

3rd. Chaharkhanahs. The pieces are about 18 cubits long, and $\frac{8}{7}$ of a cubit wide. The average value is $2\frac{1}{2}$ rs. Each loom weaves $6\frac{1}{2}$ pieces in the month. The warp requires 10 parts of cotton, and 15 parts of tasar; the woof 10 parts of cotton and 18 parts of tasar, so that the pieces are checkered. The cotton thread is worth 6 anas, the tasar 1r. 6as. The dying costs 4 anas.

4th. Baftahs are pieces of an uniform colour, dyed after being woven. The pieces are of the same size with the Namunahs. All the warp is Tasar, the woof is cotton. The former costs 18 anas, the latter 20 anas; the dying and washing cost from 3 to 5 rs. for 20 pieces, or on an average 3 anas. The common price of the pieces is about 3 rs. (from $2\frac{1}{2}$ to 5 rs.) In the month a loom weaves $6\frac{1}{2}$ pieces. The foregoing kinds are mostly made for exportation; the following is mostly made for country use:—

5th. Khariasri are pieces 12 cubits long, and 2 cubits broad. They differ in size and fineness from the Duriyas. The Tasar costs 6 anas, the cotton $7\frac{1}{2}$ anas; the pieces on an average worth $1\frac{10}{16}$ rs. and a man weaves eight pieces a month. The weaver dyes this kind.

Several other kinds are made; but these are the most important, and their consideration is quite sufficient for the purposes of general estimates. About $\frac{1}{2}$ of the weavers are employed in weaving the Kharisaris; and it is said, that of every 1000 of the finer kinds 500 are Duriyas, 350 Namunahs, 100 Chaharkhanahs, and 50 Baftahs. Allowing that 2000 looms are employed on the finer goods, and that each works a proportion of the different kinds as above mentioned, each will weave to the value of rather more than 19 rs. a month. But 1000 pieces, at the above rates, will amount in value to 2600 rs. and the expense will be as follows:—

	Tasar.		Cotton.		Dying.	
	R.	A	R.	A.	R.	A.
350 Namunahs . .	306	4	459	6	21	14
50 Baftahs . . .	56	4	62	8	10	0
100 Chaharkhanahs	137	8	37	8	25	0
500 Duriyas . . .	78	2	687	8	15	10
	578	2	1246	14	72	8

Total 1897¼.

But, allowing for trifles, we may take the expense at 1900 rs. leaving 700 rs. for the weavers. At this rate, on 19 rs. worth woven monthly, he has 5 rs. 1 a. 16¾ gs. for his trouble, but he works only nine months in the year, passing the three hot months of spring in marriage festivals, so that the annual gain of each man will be about 46 rs. besides what his women make; but many men, who have two or more looms, hire journeymen to work, and they themselves spin and dye. Journeymen make about 2½ rs. a month; but in procuring a support are greatly assisted by the spinning of their women. Now 2000 looms working nine months in the year at 19 rs. a month, will give the total value 3,42,000 rs. but it was alleged, that only 2,00,000 rs. worth are exported. Two Moguls make advances to about the value of 1,00,000 rs. mostly Duriyas and Namunahs, to be sent to the west of India. The commercial resident at Maldeh advances about 10,000 rs. mostly for Baftahs and Namunahs, and about 90,000 rs. worth are sent by different smaller traders to Calcutta. As usual however in this district the merchants are very cautious in discovering the extent of their trade, and I have no doubt, that the above quantity is woven, and almost entirely exported. The raw materials required will be 49700 rs. worth of Tasar thread, and of cotton 1,63,600 rs.

Again a weaver, making coarse goods for country use, weaves monthly eight pieces, value 13 rs. Expense, (Tasar silk 3 rs.; Cotton thread 3 rs. 12 as.) 6 rs. 12 as.—Profit 6 rs. 4 as. But many of the weavers work some of the fine, and some of the coarse; I have only separated them for the sake of calculation. At this rate 1000 looms will weave in nine months 117,000 rs. worth. The value of the raw silk will be 27,000 rs. and of cotton thread 33,750 rs.

The weavers of cotton cloth in this district were stated to

be 6212 houses, having 7279 looms.* Taking the average amount which they gave of their work and profit, it was stated that the raw material came to 5/7 of the whole value of the cloth, which, so far as I can judge, may be the case. The weavers, however, pretended to a most extraordinary inactivity; and as they are the musicians employed on almost every occasion, and especially at the tumultuous marriages of this district, I cannot assert that they work more than ten months in the year. The average value of their work was stated at 7 rupees worth of cloth monthly, or 70 rupees a year for each loom, which would only give them 20 rupees for a subsistence, and their women are employed in warping, so that they bring in little or no addition. While employed in festivals they get little more than food, and what will keep their instruments in repair; we may safely therefore reject this calculation, for they in general cannot spend less than from 2½ to 3 rupees a month. In a good many divisions, indeed, it was admitted that each loom wove to the value of from 8 to 10 rupees a month, while in others they were not ashamed to reduce the whole value of the cloth woven in a month to 4 rupees. I have before estimated that the quantity of cotton yarn disposable for this manufacture is at least worth 5,94,600 rupees; and the thread being 5/7 of the value of the cloth, this will amount to 8,32,440 rupees, which will give about 114 rupees worth for each loom in the year, or not quite 11½ rupees a month for the ten months of labour. The profit will be about 32 rupees a year for the labour of each man and his wife. Although I have allowed 1,20,000 rupees worth of mixed Tasar cloth to be used in the district, although a little (50,000 rupees) is imported, and although the people are very scantily covered both by night and day, yet the above quantity is so small that it will not suffer the smallest diminution; and it is probable that the quantity of cotton imported and number of weavers has been concealed, especially considering the number of women supposed to spin.

* The introduction of steam-wrought cotton and silk goods into India duty free, has destroyed much of their native manufacture; while we have imposed from 100 to 300 per cent. duty on their sugars, coffee, pepper, rum, &c.—[Ed.]

In the wilder parts of the district most of the thread belongs to the good women of the country, who give so much a cubit to the weaver for his trouble. Very coarse and thin cloth, from $1\frac{3}{4}$ to 2 cubits wide, pays on this account $1\frac{1}{2}$ pan of cowries ($\frac{3}{128}$ rupees) a cubit ($\frac{1}{2}$ yard). The weavers are, however, often paid partly in money, partly in thread, and partly in grain. In the more cleared part of the district, a good deal is made on the same terms, but many weavers there buy the thread and sell the cloth as woven. No person makes advances for it. Perhaps on the whole $\frac{10}{16}$ may be woven on the weavers own account, and $\frac{6}{16}$ on account of the spinner. All the cloth is very coarse and of an uncommon thin bad fabric.

The weavers of cotton carpets *(Sutrunjis)* are much on the same footing as in Ronggopoor and Puraniya. The tape-maker of Bhagulpoor makes also ropes of cotton for tents. Those who knit strings *(Patwars)* use not only proper silk, but also Tasar silk and cotton, and may make about 3 rupees a month. No advances are made. The chintz makers are on the same footing as in Dinajpoor. The blanket weavers work entirely the wool of the long tailed sheep, exactly as in Puraniya.

Manufacture of Sugar.—The confectioners of this district prepare from the extract of sugar-cane, not only some of the kind of sugar called Chini, the process for which has been already detailed, but they make a good deal of a coarser kind called Shukkur, which is that chiefly used on the spot. I have not been able to learn the process.

I have nothing new to offer on the subject of Indigo. The works are judiciously constructed, and all built of brick. Mr. Christian alleges that fine indigo cannot be prepared from river water; and in support of his opinion says that he employed the same persons to make indigo, at the same works, and water both from a well and from the river, and the uniform result was, that the indigo made from the latter was of an inferior quality. I did not hear that any of the native manufacture is continued. Soda is found in some parts of the district; but it is merely collected by the washermen, and undergoes no preparation.

The earth containing nitre is called *Sora matti,* that is nitrous earth, or *Muya matti,* that is dead earth. On most

old mud walls near the bottom, where many animal impurities are generally deposited, this earth effloresces during the dry season; but owing to some unknown circumstance some walls do not produce it. It is not found in cow-houses, because these are kept clean; but it is found in the places (*Bathans*) where the cattle, that feed in the wastes, are assembled at night. It is also found about all old established villages, on the roads and places (*Gaundahar*) where the cattle are assembled as they go out or return from pasture, and where the carcases of the dead are thrown. The efflorescing surfaces may be scraped once in from 8 to 15 days, during dry weather: but rain stops the process for some time. The saline earth procured from old walls is reckoned the best; but both kinds are used indiscriminately, and mixed, as they can be procured. About the 1st of September a space of from 3 to 10 kathas, or from about 5400 to 18000 square feet, is ploughed round each boiler (*Kuthi*), and is kept clear of weeds throughout the season. This space is called the Phar, and its use is for spreading out the saline earth to dry. The filtering cistern is rather larger than in Puraniya, but there is no other difference in the apparatus. In each cistern are put about 2 or 3 sers of ashes from the furnace, with from 15 to 25 baskets of earth, each basket being as much as a man carries on his head, or perhaps 60lbs. The earth that remains after filtration is called Sithi, is collected in a heap, and kept until next season, when a portion is always mixed with the fresh nitrous earth brought in from the villages, spread out on the Phar to dry, and then filtered. The Ras, Muran, or ley, is boiled in unglazed earthen pots, each containing 10 or 12lbs. weight; and after some evaporation, the contents of from 10 to 12 of these boilers are thrown into a large wide mouthed jar (*Nand*). During the night the liquor cools and deposits some nitre. The liquor that remains is called Kahi, is boiled and cooled a second time, and deposits more nitre. The liquor which then remains is called Jarathi, and is thrown on the heap of earth called Sithi. The scummings, called Udiyan, are here thrown away as useless; and the people allege that the Khari-nemak comes from Dharhara, in Tirahut, and is prepared from a peculiar earth.

The Company purchases the nitre of the second boiling (Kulmi), which is prepared by the same manufacturer that

makes the crude nitre (Kachcha). Eight or 10 sers (16 to 20 lbs.) are dissolved in a large pot of boiling water, and allowed to stand for about an hour and-a-half, when the earth subsides. The clear solution is then taken out by a cup, evaporated to a sufficient degree, and put into a vessel to cool. When cool, the contents are poured on a strainer, which retains the nitre, and allows the ley to run through. This ley also is called Jarathi, and is thrown on the heap of earth called Sithi. The remains of this ley are washed from the nitre by pouring a little cold water on the contents of the strainer. Four sers of raw nitre give 3 sers of Kulmi, such as is exported by the Company to Europe.

On the north side of the river the commercial resident purchases the whole nitre by contract at 2 rs. $4\frac{3}{4}$ anas a *man* (82 s. w. the ser),=84 lbs. $2\frac{1}{4}$ oz. avoirdupois. The nitre is delivered on the spot in bulk, and the Company is at the expence of carriage, risk and package. The commercial resident has three agents (Gomashtahs) at Chhapra. Singgiya and Man. These make advances to the contractors (Asamis), who are all natives of the place, wealthy and respectable men. Under the agent of Man are eight contractors. Babu Gondar, one of these, is contractor for seven Pergunahs, two only of which, Chhai and Pharkiya belong to this district. He again employs agents (Gomashtahs), who reside in the different Pergunahs, make advances to the actual manufacturers, receive the nitre from them, and deliver it to the order of the commercial resident. Each of these inferior Gomashtahs, or agents of the contractor, has whatever messengers he requires, he paying their wages; but the commercial resident furnishes each with a badge of authority; for without that nothing in this country can be done. The contractor makes as much nitre as he can, and refuses no man employment. He advances $2\frac{14}{16}$ Arcot rupees for the *man* of 101 s. w. a ser, or rather more than 103 lbs. $14\frac{3}{4}$ oz. At this rate he pays sicca anas $42\frac{83}{100}$ for the large *man*, which he delivers to the Company for $36\frac{3}{4}$ anas a small *man*, or at $45\frac{26}{100}$ anas for the large *man*; so that he has only 5,674 rs. profit on 100,000, and out of this he pays all charges of merchandize, and risk of bad debts. He however receives in advance all the money that is necessary. So small a premium or agency, would show a great

economy in the management of the Company's concerns; but, although I have not been able to trace with certainty the circumstance, I have no doubt that this is not a fair statement, and that some source of profit was concealed. One indeed will be afterwards mentioned; but it is only conjectural.

The actual manufacturers are here called Nuniyas, or saltmen, and are of many different castes. At each furnace are employed from three to five persons, men and women. The latter boil; the former collect earth and fuel, for which they pay nothing. The quantity made in Chhai and Pharkiya varies from 800 to 1,400 *mans* delivered to the Company, according as the season is dry or wet; but the average is about 1,300 *mans*, the unfavourable years being few. Each furnace therefore makes on an average 9 *mans* 7 sers heavy weight, for which the owners receive 26 rs. 6 anas (Arcot); but these are commonly current. Each furnace employs two ordinary families, that is two married men and their wives; but each can cultivate a small farm, or can work as a labourer during the season, when there is the greatest demand. In fact most of them have farms of one plough. Some few of them have sheds, under which they boil during days of occasional rain, that happen in the fair season; but none have places in which they can deposit earth for boiling in the rainy season, and they are too necessitous to be able to keep until then, the crude nitre for refining.

Exports and Imports.—The accounts which I procured of these were uncommonly defective, the merchants being very shy, and much alarmed. In almost every case, where I had an opportunity of forming any estimate, I found that the quantities reported by the traders were rated very much under the real amount; and that these people carefully concealed the extent of their trade. I have little reliance therefore on the amounts stated in the table; but it will serve to show the nature of the articles in demand, and their proportional importance, as one is likely to be as much diminished as the others.

Brokers are partly employed in the eastern parts to purchase silk, and partly in the western parts to purchase whatever is wanted, but chiefly grain. The Kothiwals or bankers are on the same footing as in Puraniya. Two indigo planters

deal in bills of exchange, and one of them to a greater extent than any person in the district. Of the natives one house belongs to the place, the others are strangers. They take bank notes at a small discount, of from ½ to 1 per cent. Both those who change gold and silver, and those who deal in copper money and cowries are usually called Surrafs, although Fotdar is also a term known for the latter people. Many Modis, druggists, and drapers deal in small money, and some of the Surrafs in their turn deal in cloth and cotton. Both kinds of Surrafs and Modis advance money or provisions, to those who are living on monthly wages, or allowances.

In the district are seven Rokari or Nukudi Mahajans, who lend money as in Ronggopoor. They have capitals of from 10 to 50,000 rs. Two of them in Mungger formerly dealt in bills of exchange, and on that account are called Kothiwals, but have of late given up that branch of commerce, owing probably to the introduction of bank notes.

Places where Commerce is carried on.—The people here are somewhat less addicted to markets than those of Bengal, and deal more with shop-keepers, or with traders, who have small warehouses.*

The same complaints concerning illegal exactions, taken at market places, exist here as elsewhere, and it is alleged, that they are usually made in the name of God, some pretended religious mendicant being appointed by the Zemindar to collect money for the celebration of some ceremony, or for the support of some place of worship; but a trifle merely is expended, and the remainder is divided between the mendicant and the Zemindar. Farther, in every great market the Zemindars erect sheds, and take duties from those who use them; and it is alleged, that none are allowed to sell articles of any amount who do not use these sheds. The Company, when the duties on the market places were abolished, purchased the land, and the right to erect such sheds, should be perhaps reserved to government, and might be made a source of revenue. It is farther alleged, that all the understrappers of police help themselves to whatever

* The ancient custom of markets is prevalent in India generally; it would be a good policy to establish fairs in central towns, annually or biennially.—[Ed.]

they want, and the difficulty of procuring any thing whatever at the capital, is by many attributed to this practice.*

During the Mogul government it would appear, that in towns every trade had a chief called by various names, such as Chauduri, Mistri Dangriya, &c., who received petty fees from his associates, represented all grievances to the officers of government, regulated the prices of labour and commodities, settled petty disputes, and supplied any large demands, such as when persons of rank, or bodies of troops passed. Some of these persons have still the (Purwanahs) grants made to them or their fathers, either by Mogul officers, or by the collectors who succeeded; and in the three towns, every trade still continues to obey very implicitly the orders of some such person, although now, I believe, they have no legal authority. In fact, I find that the only thing which these people now attempt to do, is to fleece the Europeans, who may pass. No person but these men will sell anything to an European's servant, or perform for him any service, and these persons fix prices altogether unreasonable, must be always paid in advance, and very often perform what they have stipulated in a very inadequate manner. The only remedy is a civil action, probably to be tried two or three years afterwards, and in which the witnesses must perhaps be sent some hundred miles. This is a complete bar to every complaint. At some principal market places on the road, one person of this description (Chaudhuri or Dangriya) has a superintendence over the whole, and acts much in the same manner. I would propose, that in the chief towns at least, such persons should be legally appointed from year to year, and selected by the magistrate from among the most respectable persons of the trade or profession; and that in the appointment the inclination of the members of the trade or profession should on all occasions be consulted. The duties of the persons selected should be the same as in the Mogul government. In the same manner the general charge of the police in these towns should be entrusted to one or more chief merchants or traders, who should be annually appointed, with the con-

* The Author strongly recommends Municipal Government for the principal towns.—[Ed.]

sent and approbation of the Chandhuris, and who should also act as commissioners for the decision of petty suits. Duties of course should be levied to defray the expense of the establishment in clerks and messengers; and for keeping the roads through the towns clean and practicable.

Coins, weights and measures.—The Calcutta Kuldar rupees are by far the most common currency, and not above $\frac{1}{4}$ of them have been marked. Other rupees pay a Batta, or deduction, except in the purchase of cloths, all of which are sold for inferior money. Gold has almost entirely disappeared; and, if wanted, must be purchased at from $16\frac{1}{2}$ to $16\frac{3}{4}$ rupees for the Mohur. In the Behar part of the district, copper money is much more common than cowries, and even in the Bengalese part it is current. The common Paysas, or copper money are Lohiya, or Herba, and Gorakpoori. The latter are pure copper, the former are said to be adulterated with iron. The marks are totally worn away, and no one can tell by whom they were or are made. The average value is 64 for a rupee; but it is constantly fluctuating, according to the operations of the money changers. In the S.W. part of the district, coin is seldom seen, and most commercial transactions are carried on by exchange of commodities. At the capital almost every thing is sold by an imaginary money called Taka, the name which in Bengal is given to the rupee. The Taka of Bhagulpoor contains two paysas, each paysa 64 cowries.

Weights.—All that I have said in my account of Dinajpoor concerning weights, is applicable to this district.* The Paseri varies from 5 to 14 sers. The weights in general are regulated by a copper coin called the Madhusahi Paysa, which is not current, and very seldom procurable; so that no proper means of detecting false weights exist. Some people indeed pretend to have iron or stone weights that are of the regular standard, but I know not how they could be taken in evidence. It is also alleged, that the ser of 80 sicca weight is equal exactly to $46\frac{1}{3}\frac{28}{30}$ Madhusahi Paysas; but for the sake of calculation it is usual to take $46\frac{1}{2}$. In the former

* A general standard of weights and measures throughout India would be a great advantage to commerce.—[ED.]

case, taking the s. w. at $\frac{1}{80}$ of a Calcutta ser, the Madhusahi Paysa will be nearly $309\frac{8}{10}$ grains.

Except in beating rice to free it from the husk, no grain measures are used, every thing is sold by weight. In the forests, the women who beat rice receive the rough grain, and deliver the clean by a measure called Paliya, which is said to contain about $\frac{3}{10}$ of 100 s. w.; but as the same individual measure is used in receiving and delivering, its capacity is of no consequence. At the three towns are professed weighers (Kayals), and on many estates there is a weigher of grain in every manor. He is not sworn, nor, if detected in fraud, is he liable to any extraordinary punishment. Among the natives it is generally admitted, that vast frauds are committed by the sleight-of-hand in weighers, and to this was attributed the apparent lowness of the profits which the contractor for salt-petre has. When I asked at other persons, whether he had given me a fair account, and how he came to be contented with 5 per cent. for all charges and risks of merchandise, it was answered, that "he weighed the salt." A few years ago most of the weights were stamped, by order of the magistrate, and none, except such as have been stamped, are considered legal. With such a want of a standard, the expedient of stamping is perhaps dangerous, leaving room for the most atrocious frauds and corruption.

The land is mostly measured by a pole, and here this is laid on the ground, and a mark made at each length. This is vastly superior to the extraordinary plan adopted in Puraniya; and is not liable to many objections that arise from the use of a rope: but in this manner it is very difficult to measure any line straight, and every deviation is in favour of the landlord. The number of rods in each Katha varies extremely, and even the cubit differs much in length. The length of a man's fore arm and hand is the standard in common use, and is supposed to be divided into seven Girhas; but the cubit in use varies from seven to nine girahs. In every other part that I have been, the bigah consists of twenty kathas, but in many parts of this district it contains only eighteen. No standards are to be found in the collector's office, where it is only known whether the customary bigah of each Pergunah contains eighteen or twenty kathas, but the number of cubits in each katha, and the size of the cubits,

have not been recorded. In some parts, however, the people have a yard and cubit, used chiefly for measuring cloth, and, where such are used, they were stamped at the same time with the weights. The people here have only one name (Guz) for both measures.

Conveyance of goods.—As will appear from the account of the rivers, a great part of the district is not at all provided with water carriage; and, even on the banks of the great river the natives possess many fewer boats than I expected. The Ulaks, formerly described, are the boats most commonly employed in the transportation of goods; and are in general small, none exceeding 1700 *mans*, and most being under 800. The Patelas are rather fewer in number than the Ulaks, and about the same burthen; and, as I have mentioned in my account of Puraniya, differ only from the Koshas of that district in being wider in proportion to their length. The hire of these two descriptions of boats from Mungger to Calcutta, when the whole channel of the Bhagirathi is navigable, is from 10 to 14 rs. for the 100 *mans* burthen, reckoned by the quantity of grain which the boat might carry. The ser is equal to 84 s. w. the 100 *mans*, therefore, are equal to 77 cwt. The distance is about 300 miles. In the eastern parts of the district some boats of large dimensions are used, during the floods, to convey fire-wood; but having been there in the dry season, I had no opportunity of seeing their structure.

Both men and boats are difficult to procure, although many of the boats are professedly kept for hire, and the office of Ghat Majhi, here as elsewhere, would require to be regulated. So difficult is it to procure boats, that at Kumurgunj almost all the trade with Mungger and Bhagulpoor is carried on by means of carts or oxen, although it stands on the bank of the river about half way between the two places. The boats called Dinggis, such as I have described in my account of Puraniya, are a good deal used; but many boats called Dinggis are clinker built, and on the Pateli construction. On so large and tempestuous a river as the Ganges these are very dangerous. Except the Nawab at Rajmahal, none of the natives possess boats of any kind accommodated for pleasure or travelling; but in the eastern divisions a tilt is

occasionally put over the after part of a Dinggi, which is then called a Pansi, and accommodates travellers.

Canoes are not much used, except in the eastern parts of the district, and in the inundated parts farther west the people are very much confined during the floods, and in cases of an inundation uncommonly high, have in general no means of escape. The Tal tree, so commonly used south from Calcutta, as a conveyance during the floods, is neglected every where here except in Kalikapoor, although it is very common.

In Lakardewani advantage is taken of the floods to float timber and bamboos down the torrents, but in Karakpoor and Gidhaur this is entirely neglected. In Kalikapoor again, towards the close of the season, when the water becomes scarce, floats are conducted down the creeks by making dams, and collecting the water, so as to render it deep enough to carry the floats for some way. When the float reaches the dam, another is made some way lower down, and the former one is broken to transmit the float. This is a very rude commencement of the art of constructing locks.

The greater part of the internal commerce of the district is carried on by carts, and back loads; but the roads are exceedingly bad. By far the most frequented and important road in Bengal, leading from Calcutta to Patna by Moorshedabad, passes through the whole length of the district; but for from two to three months every year it is not passable with any sort of carriage, or even with loaded cattle; and, even at other seasons, a four-wheeled carriage or waggon could pass with much difficulty, and some danger. There is in particular a great deficiency of bridges, and the descents into many of the creeks is so steep as to impede very much the passage, and to diminish the load of carts. In many parts there is an abundance of hard materials, with which permanent roads might be made; but, as in others these materials are too remote, and as one bad place renders the whole useless as a line of communication, no attempt at improvement, farther than what I have formerly recommended, should perhaps be made. A great part of the labour of the convicts, as usual is employed in making roads near the capital and Mungger, which, although no doubt of

some use, are chiefly intended to give the European ladies an opportunity of taking an evening ride; and much also, as usual, is wasted on keeping the grounds of the Europeans in neat order. Were the whole bestowed on the great road, it might be kept in tolerable repair, during nine months in the year, and might be gradually so raised, as to be easily practicable at all seasons on foot. This care might be also extended to the branch from Paingti to the great road, which opens the communication with Puraniya, and is only a few miles in length.

Another line of public communication is still wanted; there is no road between Bhagulpoor and Virbhum, so that the judges of circuit must return from the latter place to Moorshedabad before they proceed to Bhagulpoor. This appears to me a line of the utmost importance, and its formation would, I have no doubt, tend very much to improve the neglected interior parts of both districts; but the labour of the convicts, I am afraid, would be totally inadequate to the purpose, and indeed is scarcely sufficient, with every attention, to keep the present great road in order. Immediately south from Bhagulpoor is a considerable extent of very low land, through which a road can only be made by raising a mound; at present it is impassable for more than four months in the year, and all commerce with the interior is completely at a stand. After reaching the high land, although in general the soil is dry and firm, there are many interruptions. Many very narrow vallies of rice ground wind through the swelling grounds in all directions, and, until the beginning of December, cut off all communication. In every part there, however, there is such an abundance of hard materials, that the constructing causeways across these vallies would be an easy work, and timber is so plenty, that bridges could be of very little expense; for each valley would require at least one bridge, to allow the water to pass from one field to another. As a means for carrying this work into execution I would propose, that a tax should be levied on all pilgrims going to Baidyanath, and on this account, that the road should lead by that place from the capitals of the two districts. This, it is true, would not be the most direct line, but the inconvenience arising from the circuit would be compensated by the means of facilitating the passage, and of

accommodating the native travellers. All the remarks made on the roads of Puraniya are applicable to this district, except that here there is very little of the sandy bare plain, which there so much facilitates travelling.

Very much to the credit of Mr. Christian, an Indigo planter, he has made a road, better almost than any in the district, from his factory in Chandan to the river side near Suryagarha. The structure of the carts used in this district, I have already explained. Near the Ganges many are kept for hire, and receive 4½ anas a day, including ½ ana given for the driver's food. The little rude carts in the forests are an exceedingly great convenience, as they go in almost any road. Horses are not kept for carriages so much as in Puraniya, although all through the Behar part of the district there are some. They are nearly of the same quality with those in Puraniya, but rather worse, and more wretched. The mares are wrought, as much as the horses.

The Baldiya or Ladubeparis are very numerous, and have many cattle, which, they are willing to hire, when they have no speculation in view, and their cattle are very good. The rate of hire is the same as in Puraniya. Porters are only used to unload boats, or to convey passengers' baggage. In every part of the district, except Mungger, there is the usual difficulty in procuring conveyance of any kind; but at Mungger, no difficulty occurs in procuring good oxen and porters, at a very reasonable rate. I cannot yet judge, how they will perform their duty. On the great road a good deal of attention is paid to establish proper ferries, and the boats are very good and safe conveyances. On the more important ferries on the great river no attention greater than in Puraniya is shown by the police, and most of the Dinggis, being of the Pateli construction, are exceedingly unsafe on such a river. The boatmen are appointed by the Zemindars, who annually receive a rent given under the name of homage (Salami). The Sadabratas, or places where travellers experience a hospitable reception, are not numerous. Some of them belong to Muhammedans, who receive the pagan as well as the faithful; nor are the Hindus deficient in liberality, all sects being entertained, wherever the place is called a Sadabrata. Some places of entertainment however receive only religious men, and are called Akharas. On the north side of the Ganges,

in the division of Lokmanpoor, all religious mendicants may apply to the chief farmer (Jethraiyat) of the place, and obtain a supply of food. The farmer levies the expense by shares from his neighbours.

The Modis here do not entertain strangers, so that in the greater part of the district travellers are but poorly accommodated. This is especially the case in the Mallepoor division, where no one except some foreign traders at Mallepoor will receive into his house any stranger even a Brahman. This is owing to an excessive jealousy of their women. On the great road however more attention is shown to the real convenience of travellers, than in any part of India, which I have yet visited; and regular inns (Sarays or Bhathiyarkhanahs) are kept at convenient distances. Each inn consists of a number of distinct chambers; which are let by the night to any traveller or company, 8 or 10 persons travelling together often occupying one chamber. The chamber usually consists of a wretched straw hut, 7 or 8 cubits long and 5 or 6 wide, and is in general totally destitute of furniture; a few only afford a little straw or a mat to sleep on; but some, kept by obliging nymphs, have bedsteads, where favourites are received. The Bhathiyaras or keepers are low Muhammedans, such attention to strangers being incompatible with Hindu reserve; and many of their women, but by no means the greater part, refuse no favour to a liberal customer. Each keeper, according to his means, has a number of chambers, which are usually disposed in a row (Alang); and in most inns are several keepers, whose rows of chambers surround squares or wide lanes, in which the cattle or carriages of the travellers stand. Hindus pay from 1 to 2 Paysas ($\frac{1}{64}$ to $\frac{1}{32}$ rs.) a night for each chamber, and Muhammedans pay double, because the Bhathiyarin cooks for them. The keeper generally retails fire-wood, tobacco and the charcoal balls used in smoaking and purchases for his guests whatever other articles they want. Some of them also retail earthen ware, and shoes. Hindus of the highest rank can sleep in such places, when no pure person will give them accommodation; but they of course can receive little or no assistance from the keeper, who cannot bring water that the guest will use, nor can the Brahman cook in the inn. He must go to some pure place, and for that purpose usually selects the side of a river, which

in this country is the most common abode of Cloacina. In the Muhammedan government there had been erected an inn of brick at Rajmahal, which was a square surrounded by numerous small chambers, managed exactly in the same manner as above described. These have now become quite ruinous, and the keepers have erected huts in the square. Col. Hutchinson, late superintendant of the invalid establishment, built two wretched inns of brick, totally destitute of elegance, and containing very small accommodation. They are much neglected, and the keepers prefer their straw huts; because, as they allege, every petty messenger belonging to the police or any other public establishment, insisted on using the chambers without payment, and even accommodated their horses in the rooms.

At the different invalid villages near the great road the same gentleman, built a number of bungaloes, intended partly I believe, for his own accommodation, when he visited his charge, and partly for the accommodation of European gentlemen travelling the great road. These bungaloes probably have cost the public much, and the accommodation, which they afford, is very trifling. Were they at regular convenient distances, so that officers travelling from Berhampore to Dirapore might go on horseback by stages, and find every night a place of accommodation, and were this kind of accommodation extended on one hand to Delhi, and on the other to Calcutta, it might be useful, although without reliefs of horses, and accommodations to enable a person to travel without servants, little more progress could be made, than in travelling by water. As no change of horses can be procured, and as no man can go the road without waiting for servants to bring him food and raiment, these bungaloes may on the whole be considered as not at all facilitating the progress of the traveller, although no doubt they have on some occasions proved a convenience to persons laying horses for short distances, or to those going post by palanquin, when these have been overcome with heat and fatigue; but the service of which they have been, has been so trifling, that their construction must be considered as a waste of money, and even their repair would be superfluous. Most of them are now very ruinous.

For Montgomery Martins Edition of the Official Survey of Gorakhpur.

Vol. II Eastern India

J. & C. Walker Sculp.t

Published by W. H. Allen & Co. Leadenhall Street,

HISTORY, TOPOGRAPHY, ANTIQUITIES, &c.

OF

EASTERN INDIA.

BOOK II.

DISTRICT OF GORUKHPOOR.

CHAPTER I.

AREA, TOPOGRAPHY, RIVERS, LAKES AND MARSHES, METEOROLOGY, &c.

The extent of country surveyed comprehends that part of the district of Gorukhpoor which is situated to the left or north of the river Ghoghra.* The greatest length of this district in a direct line from the Gandaki, at Parasoni, to Nawara marsh, at Lachhipoor, and in a direction of about east by south and north by west, is 151 miles; and the greatest breadth, crossing the above line at right angles, from Kurimgunj on the Ghaghra to the hills some miles east from Butaul, is 95 miles. The southern corner, at the junction of the little Gandaki with the Ghaghra,† according to Major Rennell, is in 26° 8′ north latitude; according to the map constructed by my assistants its northern extremity, near Butaul, extends almost 1° 30′ farther north. Its eastern extremity on the great Gandaki, according to Major Rennell, is 3° 46′ west from the meridian of Calcutta; and, according to my map, it

* Dr. Buchanan found that this portion comprehended from 7 to 8000 square miles—that it was not merely separated by a great river, but differed considerably in physical aspect, customs, &c. It was not surveyed by Major Rennell, and but very imperfectly known. Even Dr. Buchanan could not define its boundaries with precision.—[Ed.]

† This river is now usually written Gogra.

extends 2° 22′ farther west. By tracing the boundaries on the map last mentioned, the space, of which I am now giving an account, extends to 7438 square British miles, besides the lands usurped by Gorkha, about 1200 square miles. It may be necessary to give the following observations of Dr. Buchanan on this district:—

"With regard to the statements of the various kinds of soil I have followed what was said by the natives, whom I consulted, having no reason to think that it was materially erroneous; nor can a traveller, in passing through the country, judge accurately on this point. The statements given by the natives concerning the extent of cultivation, owing to the nature of the management employed in collecting the revenue, I have considered as much more liable to doubt; and it must be observed that, contrary to what I expected, the owners of the land appeared to me often to represent their estates much better cultivated than they really are, with a view, I suppose, of obtaining immediately a permanent settlement. The statements again given by the officers of revenue I consider as liable to very numerous objections. They are said indeed to be founded on what are called measurements; but I am assured by authorities which I am inclined to believe, being that of several of the persons employed, that these measurements were in general mere conjectures, in which the judgment of the surveyor was liable to be strongly biased by money received or in vain demanded. In general, therefore, I have followed my own conjectures, formed in carefully traversing the country. Where there were places that I could not conveniently see, and which I had reason to believe were in a state different from those that I examined, I have made allowances; but of course my conjectures are liable to considerable uncertainty."

Soil.—The extent of barren land, absolutely unfit for cultivation, is small: there are few or no ravines, and hills only occupy 16 square miles. Land containing soda is considered barren, although this is by no means the case, as I have remarked in Behar. It is, however, chiefly fitted for the cultivation of rice in the rainy season. In the dry, the soda being allowed to effloresce, no doubt checks every kind of vegetation. Calcareous nodules never here infect the soil, as, so far as I know, they are found only in the beds of rivers. In the bottom of wells, and in the rivers near the hills, there are often found gravel and small stones; but, except on the very roots of the hills, these never appear on the surface, nor interfere with the husbandman.

There are here two kinds of a strong free soil. The one containing little sand; and its clods, when dry, are exceedingly hard, so as to build good walls if sheltered from the

rain; but when moist it possesses little or no tenacity. It very quickly parts with moisture, consisting of a dry clay mixed with sand, so that the crops, which grow on it in the dry season, require much watering, and the pasture burns up soon after the ceasing of the periodical rains. It is, however, far from being a poor soil, as, when watered, it not only gives heavy crops, but is much less readily exhausted by repeated cropping than any other soil in the district. In the places where fallowing is best understood, it produces from eight to ten years after a fallow of two years, and for the first three gives annually two crops; while the fine free vegetable mould requires two or three years fallow after three years of cultivation. The soil in question is also more favourable for plantations, and produces very stately trees. There is a great deal of a rich vegetable mould, which is very retentive of moisture, so as to produce some verdure even in the worst seasons, and to yield crops of wheat and barley without irrigation, although by this operation the crops are always considerably improved, except in inundated lands, where the trouble is unnecessary. This soil seems to be a favourite residence of earth worms *(Lumbrici)*, which in waste fields raise it into little heaps, a foot perhaps high and three or four inches in diameter, that often cover the whole surface, and render travelling on it exceedingly troublesome. This rich mould is seldom covered with forests, and in a state of nature seems chiefly productive of long coarse grass or reeds, which, if burned in February, send forth fine tender shoots in the heats of spring. There is much clay land, which in general is almost as retentive of water as the fine vegetable mould, and indeed the two run into each other, the stiffer kinds of vegetable mould being often called clay. The clay is more favourable for the production of trees than the free mould is, and many forests grow on this soil. No soil of a red colour was observed on the surface, although earths of this kind may be procured by digging.

Elevation.—The only elevation which can be called a hill is Maddar, a corner of the Himadri mountains, or Emodus, which for some way form the northern boundary of the district, and send this corner through a projecting angle to the bank of the Gandaki. Maddar, although it has a plain to the north and south, is connected with the great mass which

rises, one mountain heaped on another, till it reaches the summits covered with perpetual snow; but the elevation of this projecting angle is inconsiderable, not exceeding 12 or 15 hundred feet perpendicular, as in general may be the case with the hills of Emodus next the plain of this district. Like them, it is exceedingly steep and arid, and rises suddenly from the plain with no detached rocks, and very little broken ground at its bottom. Although it is very steep, it presents few or no precipitous rocks, but is intersected by deep ravines. The trees on it are not very large, and stand at considerable distances; while the earth between, in the dry season at least, appears bare, and is destitute of verdure. The appearance of these nearest mountains, therefore, from the plain adjacent, except as affording variety from the tedious uniformity of a level overwhelmed with plantations, is not agreeable. This country, however, in every part enjoys the advantage of having the most magnificent view of the snowy peaks of Emodus, and during the season which I passed in it, the atmosphere having been cleared by frequent heavy rains, I had more opportunities of enjoying the stupendous grandeur of the scenery than I ever before experienced. From the banks of the Ghaghra and Gorukhpoor the lower hills are invisible, but the snowy mountains are most distinctly visible, with all their tremendous precipices, angles and recesses. At Lotan the lower hills appear as a black mass at the foot of the mountains: at Pali the form of each dark hill is visible, and although some of the lower hills had their tops crowned with snow in winter, implying, I presume, in that latitude, an elevation of from seven to eight thousand feet, the immense ridge of Emodus towered far above them. The utmost magnificence, however, of rude nature that I have ever seen, is the view from the Gandaki, in passing up that river by the foot of Maddar. The river is larger, I think, than the Thames at Chelsea, and much finer, being perfectly clear. Its banks are partly abrupt rocks, partly levels covered with very stately forests, while every turn opens a new view of the snowy peaks seen over an endless variety of dark shaggy mountains, which in most countries would be considered as stupendous.

The whole country except Maddar, may be considered as level, although in the eastern parts there are some very sin-

gular ridges, to which I have no where seen anything analogous, except on the banks of the Teth immediately below the town of Callander in Scotland; and concerning the formation of these I have heard nothing satisfactory. These ridges have very much the appearance of having been the work of men, and some of them near Callander, by persons totally ignorant of such works, have been called a Roman camp; but from their form there can, I think, be no doubt, that the whole of these ridges are natural productions, as no possible use can be assigned for works so constructed. The ridges in this district are pretty numerous; but many are very short. I saw however two of very considerable extent. One is on the south-west side of the Hirna between Nichlaul and Munsurgunj. This is about two miles in length, and there are several smaller detached ridges on the north-east side of the river; but the whole is not parallel to the stream, nor does it cross at right angles, and seems totally unconnected with the river, which is trifling. The ridge winds very irregularly, and is from 20 to 40 feet in perpendicular height, and from 100 to 300 yards wide.

The other long ridge I crossed on the road between Parraona and Kesiya about 2½ miles from the former place. It extends east and west, from where I crossed, as far as I could see, and winds very irregularly, being about 230 yards wide and 60 or 70 feet high. There is not at these ridges the smallest appearance of any excavation on either side to indicate their being a work of art, nor could any reason be assigned for works of such a form. These ridges consist of a light sandy soil, and are considered as barren; but this barrenness arises more from their declivity, which prevents artificial irrigation, than from the nature of the soil, which produces very good trees; and where they properly planted, there elevation in so level a country would render them very striking and beautiful objects; but it is the very best of their level fields, that the natives have in general chosen to waste on the plantations, with which the country is overwhelmed, and these ridges produce little but poor pasture and thorns. Enough has just been planted to show, that trees would thrive.

The level country is very flat, but only a small part is subject to inundation from the rivers. Owing however to the

flatness of the country, the rain is long running off, so that many parts during the periodical rains are covered with water, which I have not included among the inundated lands. The low lands here are perhaps not so rich as those on the banks of the Ganges in Shahabad; but still are very valuable, and, as in all cases they require less trouble, and in many, none for their irrigation, they are better cultivated, although their crops are more uncertain than those on the higher lands. The difference in the proportional extent of cultivation in the two kinds of land, is in fact much greater as the whole occupied lands in the inundated parts consist of fields; while a very large extent of the high lands, there stated to be occupied is wasted in plantations, which have been so much multiplied, that the greater part of their produce is no longer saleable. In the inundated lands, where the soil is clay or vegetable mould, no crops require artificial irrigation; but where they are of an arid nature, wheat and barley require this assistance, although some other crops thrive without such an expense.

In the lands exempt from regular inundation, winter crops are always the better of artificial watering; although, where the soil is retentive of moisture, this operation is sometimes neglected, even with wheat and barley, and is never given to Chana; but where the soil is not retentive of moisture, watering is indispensable for everything.

This high land is divided into three stages, which in fact depend chiefly on their elevation, although their distance from the respective villages, to which they belong has also some effect. The villages are always in fact built in high places, and each usually occupies the highest spot that is near the centre of its territory. The land nearest the village, and therefore the highest, usually extends from the village 4 or 500 yards, and receives the chief attention of the inhabitants; and being generally more or less manured, and carefully watered, usually gives two crops in the year. The lands next to these generally produce only one crop, either of such kinds as are reaped in summer, or spring. The most remote and lowest lands are cultivated with winter rice, on which no great pains are bestowed, or with some kinds of pulse, that require still less trouble.

Although most of the inundated land is near the Ghaghra and Gandaki, it must be observed, that in the southern part

of the country there is very little rice, while towards the hills this grain forms the principal crop. The reason of this is, that the inundated land is chiefly fitted for the crops, which are sown after the waters retire, and that the higher land intermixed with it rises into little swells, which for the cultivation of rice would require reservoirs, such as are used in Behar and Shahabad, none of which have been here constructed, while the lands towards the hills are so very level, that the rain-water does not run off until the crop of rice has time to ripen.

Rivers.—In treating of the rivers of this district, I shall first describe the Ghaghra, then the Rapti, then the lesser Gandaki, and finally the larger Gandaki.

Ghaghra.—The accounts of the great river, which passes the ancient city of Ayodhya, that I have received, differ not only very much from the maps of Danville and Rennell, but disagree very much among themselves. The confusion is increased to the most perplexing degree by very different names being not only given to different parts of the same river; but even the very same portion by different people and tribes is called by different names. Finally the native maps, that I have received of the country; through which the remote branches of this river flow, are more imperfect than those of the country either to the east or west, so that what I have to advance on the subject is liable to great doubt; but as the information, if true is curious, I think, that until more accurate information is obtained, it should not be neglected.

At the city of Ayodhya this great river among the Hindus is usually called Sarayu (Soorjew, Rennell), and this name is in use in their sacred language; but by the Muhammedans it is called Ghaghra, from the Sangskrita word Gharghara. This name Mr. Gladwin (Ayeen Akbery) wrote sometimes Gehgher, sometimes Goghar; and Major Rennell writes it Gogra. The mountaineers from the east side of this river assure me, that neither name is known on the hills, and that the Sarayu celebrated in their legends is formed by the junction of the Bheri river, which I take to be the Soorjew of Major Rennell, with the Karanali Salasu, or Sanbhadrik, which is no doubt the Gogra of that eminent geographer, as the remarkable fountains emitting flame at Dulubasandra are situated near its bank. The inhabitants of the low country also in general

agree with Major Rennell, in calling the eastern branch the Sarayu, and the western the Ghaghra, but the western branch which they mean, is quite different from that on which Dulubasandra is situated, and at any rate its principal branch on the mountains is the Kalinadi. Both these authorities therefore, that is, the mountaineers east from the river, and the people of the low country agree, that a great river coming from the west, and named the Ghaghra, unites with the Sarayu, coming from the east, and that this latter among the Hindus is considered as the principal river, and communicates its name to the united stream, while the Muhammedans adopt the opposite opinion, and continue the name Ghaghra to the river at Ayodhya. A learned and intelligent Brahman, however, Hariballabh of Kuman, from the mountains on the west side of the river, and perfectly acquainted both with the country and the legends, says, that the names Sarayu and Ghaghra are applicable to the same river, through the whole length of its course. That it rises by two petty sources in the Pergunahs of Karuvirpoor and Danapoor, on the hills north from Almorha; but far removed from the snowy peaks of Emodus. These two torrents uniting at Bagheswar form the Sarayu, which continues to run east, receiving the Panar a small channel producing gold, and the Ramagangga of considerable size. Some way east from the junction of the latter, the Sarayu receives a river much larger than itself, which rises from the perennial snows of Emodus, and is called the Kalinadi. The united stream is the Sarayu, or Gharghara, and passes south-westerly towards the plains, nor does my informant know more of its course; but, that it passes by Ayodhya to join the Ganges at Dadri, he has learned from legend.

The account of the most intelligent boatmen that I could procure at Ayodhya, is as follows. The boats which load timber, can proceed no higher up the Ghaghra than Mundiya ghat, which is in the Bareli district, about 18 coss, or 27 miles, road measure, from Pilibhit. The channel is there very wide, but the stream is not large, and is not above two cubits deep. The territory of Gorkha commences about seven or eight coss from Mundiya, at a large forest named Langsar, from which much timber comes. About twelve coss below Mundiya the Ghaghra receives from the mountains a branch

called Neaula, down which much timber comes from the territory subject to Gorkha. Twelve coss lower down, it receives the Kauriyar, and immediately below its mouth a third named the Geruya enters. Timber is brought down both these rivers, and on the latter, in the dominions of Gorkha, are two great forests, Amba and Palamu. I suspect, that the Kauriyar and Geruya, and perhaps even the Neaula are only different mouths of the same river, which in the mountains is called Setigangga, or the white river.* The Hindus have given the preference to the Sarayu, which is said to be the smallest, nor is the larger branch any where fordable below the mouth of the Bhakosa. The united channel begins to form the boundary between this district and the territories of the Nawab Vazir, just at the city of Ayodhya, where its channel and stream seem fully larger than that of the Ganges at Chunar. For about 18 miles below Ayodhya its width is from one to three miles, as it surrounds two very large islands, the property of the upper of which is disputed by the landholders of the two governments; but the lower is the undisputed property of the Muhammedan prince. About ten miles above where the Ghaghra comes to be the boundary, it sends off a channel

* Dr. Buchanan adds in a note his reasons, namely, that "between the Neaula and Geruya is a town named Bharthapoor, no doubt the Bartapour of D'Anville, who makes the three rivers form an island; nor, so far as I can learn, is there any other considerable river in the mountains between the Sanbhadrik, on which Dulubasandra is placed, and the Kalinadi or Ghaghra. The illustrious French geographer, indeed, places Dulubasandra on the same river with Bharthapoor, but all the natives of the hills, whom I have had an opportunity of consulting, allege, that in this he is mistaken. About six coss north from the mouth of the Geruya, is a town named Padnaha, belonging to Gorkha. These three rivers enter the Ghaghra in the Company's district of Bareli. About 27 coss below the mouth of the Geruya, and in the territory of the Nawab Vazir, the Ghaghra receives the Bhakosa; and in the same territory, about 23 coss above Ayodhya, it receives the Sarayu of the eastern mountainers and lowlanders, as well as of Danville and Rennell. This river, as I have already mentioned, is said to be formed by the union of the Sanbhadrik and Bheri, an account of which will be found in the appendix. Below the junction of this river it is universally agreed among the Hindus, that the name of the river is Sarayu. With the Muhammedans the western branch has communicated to the united stream the name by which it is usually known among the lowlanders, as it was this branch."

merely called the Sota, or branch, which runs parallel to the main river for above six miles, forming for more than four the boundary between the two governments, when it joins the Teri river. I crossed this branch on the 11th of December, where it was about a quarter of a mile wide, and perhaps a fourth of the channel might be covered with water knee deep, but nearly stagnant.

The Teri comes to the boundary of this district, about 14 miles from where it receives the above-mentioned branch of the Ghaghra, and at the boundary receives from the north-west a marshy channel called the Nawara jhil, which forms the boundary for about four miles. The united channel called Teri is inconsiderable, and winds much, partly along the boundary, and partly on both sides of it, until about four miles from where it receives the branch of the Ghaghra called Sota. It there joins with a similar branch of that river called Bhagala, which for some way serves as the boundary. The united channel is called the Teri. On the 11th of December I found it about 200 yards wide, and one half of the channel was covered with water knee deep, and having a pretty strong current.

About half a mile below the junction of the Teri with the branch of the Ghaghra called Sota, it receives from the north a small river called the Nakaha, which has a very short course of about three miles; but in the beginning of December contains a small stream. Immediately before it joins the Teri, it receives a rivulet, which has a much longer course than itself; but contains less stream, and has no proper name, but at Nawabgunj is usually called the powder-magazine rivulet (Barudkhana nala) from a building of that kind erected on its bank by the Nawab's father. Its stream at Nawabgunj is very inconsiderable, but further north it enlarges into many long, wide, and shallow pools, filled with aquatic plants, and called Uttara gangga, or the northern river. It commences by receiving the draining from a kind of lake in the form of an horse-shoe, which is called the Parbati jhil. This again communicates with another similar lake called the Arangga jhil, by a drain, which receives a little rivulet called Chiriyahagina. Parbati also receives the drainings of another kind of lake called Mahadeva jhil, which receives two rivulets. All

these branches of the Nakaha are of the utmost importance to agriculture, containing, so long as is requisite, a large supply of water very near the level of the fields.

About two miles below the mouth of the Teri, the Ghaghra receives a small river named the Ghaghuya nala, or nara, as the word is here pronounced. This has a course of four or five miles, and is the drain from a large piece of water or jhil, which goes by many names after the different villages on its bank. Both this piece of water, and the Ghaghuya, which drains from it, are of great use to the farmer. Below the mouth of the latter, the Ghaghra sends off a small branch or Sota, which has no peculiar name, and its course is not two miles in length.

After passing the two large islands below Ayodhya, the Ghaghra, for about 80 miles in a direct line to the mouth of the Rapti, has no interruptions of that kind, and is a clear channel usually about $\frac{5}{8}$ of a mile wide. In two places, however, it sends off narrow branches called sotas, which, after short courses, rejoin the river, and are of no use to agriculture, but do a good deal of harm by cutting the fields. It would seem, however, very practicable to shut their ends, so as very soon to obliterate their channels. One of them separates from the river about two miles below the lower island, and rejoins it about four miles lower down. The other separates about nine miles above the mouth of Rapti, into which it falls a few hundred yards above the junction with the Dewha.

About 14 miles above the upper end of the latter, the Ghaghra is joined by the Koyane (Quannah R.), a fine little river, which with its numerous branches fertilizes all the south-eastern parts of the district, and which shall be now described. It reaches the boundary of this district about 13 miles west from Dumuriyagunj, and for between 9 and 10 miles forms the boundary between the dominions of the Company and those of the Nawab Vazir. It there sends to the south a small branch named the Jehada, which joins the Bisui after a course of about three miles, its whole length forming the boundary between the two governments. This boundary then ascends to the north-west along the Bisui for about 20 miles.

The Bisui in the upper part of its course is nearly as large as the Koyane, and is entirely in the country of the Nawab.

After it receives the Jehada, its remaining course of five or six miles is entirely through the Company's territory. In this part of its course it has a channel perhaps 50 yards wide, and in the end of December contains a narrow but rapid stream about three feet deep. Although it contains many aquatic plants, especially the Valisneria spiralis, it is perfectly clear. It would at all seasons be difficult for loaded cattle to pass in any part. A little before it joins the Koyane, it receives from the south-west a small stream called the Batparoya, which has a course of four or five miles.

The Koyane, before it receives the Bisui, is a similar channel and stream, but this is a little wider and deeper, nor without boats or bridges would it be at all practicable for loaded cattle. A little below the junction of the Bisui the Koyane receives from the north-east a rivulet called the Bengwora, about the same size with the Batparoya. It is a small muddy channel, which in the end of December I found nearly dry. Below this the Koyane in the beginning of January contained a fine stream, which I could not cross on an elephant without boats.

About 13 miles below the junction of the Bisui the Koyane is joined by the Rawai, which rises near Lalgunj, and has a course of about 22 miles in length. About five miles from its mouth it sends to the left a branch named the Majara, which, after receiving a rivulet named Gehadi, joins the Koyane about two miles higher up than the main stream of the Rawai. This latter is about 50 yards wide, but in the end of November the stream is not more than 12 or 15 feet broad, although it is clear and rapid. From the marks it has left, it would appear to swell enormously in the rainy season. Between the two mouths of the Rawai the Koyane receives from the north a rivulet called the Manari, which, although small, is very useful to the farmer; as its water is near the level of the fields, and is collected by dams, affording a plentiful supply in December and January.

About four miles below the mouth of the Rawai the Koyane communicates with one of its branches named the Kathne, by a channel named Sahiyabahiya, which is eight or nine miles long, and forms the boundary between the divisions of Basti and Sanichara. The Kathne rises in the northern part of the division of Basti, and, after a course of 10 or

12 miles to the south-east, swells out into a kind of marshy lake five miles in length. Below this its channel is contracted, and in January is nearly stagnant but deep. This, however, is probably owing to dams thrown across, partly for irrigation, partly for catching fish. As these dams are mere mounds of earth, its stream even in the rainy season cannot be very considerable, but on that account it is the more valuable, as it is near the level of the country. Where the stream is rapid, as in the Koyane, it forces its way into the soil so far, that the raising it for irrigation is attended with much labour. A very little below the mouth of the lake the Kathne communicates with the Koyane by the channel named Sahiyabahiya, which has been already mentioned; and after that has an uninterrupted course of about 16 or 17 miles, when it entirely joins the Koyane.

About 11 miles above the mouth of the Kathne, and 10 below the separation of the channel called Sahiyabahiya, the Koyane receives from the right a river named the Manaura or Manorama. This enters the western boundary of the district from the territories of the Nawab Vazir, and about five miles from thence passes Manikapoor, where it is a small channel, in which the water is collected for irrigation by dams of earth. About seven miles south-east from Manikapoor it is joined by a very inconsiderable rivulet named Sajai, which has a course of about 14 miles of length, but in the dry season may be passed without notice.

Nearly opposite to the mouth of the Sajai the Manaura receives the drainings of two extensive marshy lakes named Dinnagar and Payer. About three miles lower down it receives a stream fully as large as itself, which comes also from the territories of the Nawab Vazir, and for about four miles serves as a boundary, while it has a course of about 14 miles entirely within this district. It is highly useful to the farmer, admitting of having its water collected by mounds of earth, and affording a plentiful supply in December and January.

After receiving the Chamnai the Manaura passes south-east for about 20 miles through the centre of the Khamariya division. In this part of its course it is in general about 20 yards wide, and full of weeds, but rather deep, and cannot be forded except at some parts, where it is usually wider: at Koraiya Ghat the ford in the beginning of December was

about two feet deep. About a mile after entering the division of Mahuyadabar, the Manaura receives from its right a small stream called the Ramrekha, which arises by two heads, that unite at Khamariya, from whence to its junction with the Manaura is about 10 miles, and from thence to Mahuyadabar is about an equal distance. At this place the Manaura in the end of November was a fine stream 20 yards wide, 2 feet deep, and rather clear.

Between the Manaura and Koyane there is a rivulet called the Machhai, which runs east through part of the divisions of Khamariya and Mahuyadabar, and is lost in the latter, without communicating with any river. It is lost in a large marshy lake called Chanda. Between the mouth of the Manaura, and that of the Kathne, the Koyane communicates with the Sarayu by two channels called Maldaha, which contain a good deal of stagnant water, swelling occasionally into narrow marshy lakes, and highly useful to the farmer.

Below the mouth of the Kathne in November I crossed the Koyane, where it was about 50 yards wide, but contained much water, being at least 6 feet deep. In some parts, however, it is said to have only a foot and a half of water, but at all seasons canoes can pass up and down, and in the rainy season it could be navigated by large boats; but, so far as I could learn, it is never applied to the purposes of commerce; and disputes about the property have prevented the produce of the forests on its banks from being brought to market, except in carts. About four miles below the mouth of the Kathne the Koyane receives from its right a rivulet named the Keyane, in which in November I found the water about 30 feet wide, and knee deep. About seven miles before entering the Ghaghra, the Koyane receives also from the right another similar rivulet called the Jhijara.

Opposite to the mouth of the Rapti the Sarayu divides into two branches surrounding an island, the property of which is disputed between the people of this district and those of the province of Benares, which reaches to the great river about the upper end of the island. Somewhat there about the great river, according to the Hindus, changes its name, and the remainder of its course to the Ganges is called the Dwiwaha, or Dewha (Dewah R.) or divided. People are not entirely agreed about the exact place where the

name Dewha should commence, because there are several branches of it that pass through the southern part of this district, and the province of Benares, and differences of opinion prevail concerning which of these should be called the proper Sarayu; but they all unite, and join the Ganges at Dadri or Dardara Kshatra, which is called the junction of the Sarayu and Bhagirathi, is peculiarly holy, and, on the time proper for bathing at the sacred place, attracts an immense concourse of pilgrims, while the mouth of the Dewha attracts no peculiar notice, and is no better than any other part of the Ganges.

From the mouth of the Rapti to the eastern boundary of this district the Dewha has a course of about 22 miles, separating from Gorukhpoor the province of Benares, and it is a channel from three-quarters to a mile wide, with only one small island, which is claimed, so far as I know, without dispute, by the people of this district. The stream is certainly somewhat wider, and as deep, as that of the Ganges, where the two rivers unite, and the current of the Dewha is the most rapid. In fact its sources in the Karanali are more remote than those of the Ganges, and from beyond the first ridge of snowy mountains, while those of the Ganges proceed from its southern face. Were we therefore to follow the ideas of some modern geographers, we should consider this as the true Ganges, and give some other name to the sacred stream that passes Prayag and Haridwar, just as these geographers refuse the name of Nile to the sacred river of Abyssinia.

Notwithstanding its size, no commerce is carried on in this district by means of the upper part of the Sarayu, except in sending a little fire-wood and thatch to Ayodhya, and the adjacent Muhammedan city of Fyzabad. On the bank of the part of the river called Dewha, some trade is carried on by water; but so far as I can learn, there is not one boat employed in commerce, that belongs to any town, which is on the bank of the great river within the territory of which I am now giving an account, unless ferry-boats should be considered as such. It must be admitted as some excuse, that the navigation of the Ghaghra is attended with some danger, as it abounds with calcareous tufa, forming thick crusts like rocks. Even where these are confined to the banks, the

stream is so rapid, that boats are driven against them and lost; but in this river these crusts in some parts extend across the channel, and even approach the surface in the middle of the stream. There is a very bad rock of this kind a little below Payana, and about four coss above Bhagulpoor. In the dry season this bank comes within a cubit of the surface, and, being never visible, its situation is indifferently known. In the rainy season, however, when the stream is most violent, boats pass over it without danger. Below Bhagulpoor again there is in the river another ledge of calcareous tufa or Kangkar, which is less dangerous in the dry season, because it is then visible; but in the floods it is very bad. It is situated opposite to Karingunj, a village on the right bank of the river, and nearer that side than to this district.

THE RAPTI.—The proper name of this river in the sacred language is the Airawati, so called after the elephant of the god Indra, by whom it is said to have been formed. The name is the same with that of the great river of Ava; and although our river is much inferior to that magnificent stream, it is still very considerable, and might be of the utmost advantage to commerce, were the inhabitants of its banks capable of availing themselves of the conveyance which it offers. Although very considerable, it does not issue from the hills covered with perpetual snow; but is formed by the union of two rivers, the Mari and Jhingruk, which have courses of considerable length among the lower mountains, and join a little before they reach the plain subject to the Nawab Vazir. After a long course, the Rapti comes to the eastern boundary of this district, along which it runs for about 10 miles; and then, bending more to the east, it passes for about 47 miles through the divisions of Dumuriyagunj, and Bangsi, and between those of Magahar and Mansurgunj, nor during this space does it receive any branch. The river in the heats of spring is in many parts fordable; but its current is very moderate, so that, although it contains many fallen trees, the navigation would be attended with little danger for small boats, and in the rainy and cold seasons large boats might easily frequent it. Except timber, however, nothing is exported nor imported by its means, although two places of some trade, Dumuriyagunj and Bangsi, stand

on its banks. At the former the channel is about 200 yards wide, and in the end of December was half way filled with water 9 or 10 feet deep. At Bangsi the size of the channel is nearly the same, but the banks are lower, and in the floods are inundated to a great extent, while the plain on both sides is intersected by several old channels, that would appear at one time to have contained the river.

At a point, where the divisions of Magahar, Munsurgunj, and Lotan join, the Rapti receives the Ghunggi, a river, the branches of which fertilize a great extent of country. What is reckoned the source of the Ghunggi by the natives, is neither the largest, nor most remote of its branches, nor does it proceed from the mountains, but rises from the plain in the north-west part of the division of Pali, where it is called Ghaghar. After a course of about 17 miles to the south and west, it joins the eastern branch of the Tinay, and the united stream assumes the name Ghunggi. The Tinay or Tranai, as it is called by the mountaineers, springs from the hills of Palpa, enters the plain at Butaul, and soon after divides into two branches, the eastern of which is said by the police officers of Pali to form the present boundary of their jurisdiction towards the territory usurped by Gorkha, although the officers of that government, I believe, extend their claims a good way farther east. This eastern branch of the Tinay has a course of about 20 miles to meet the Ghaghar, with which it forms the Ghunggi. The united stream, after a course of almost five miles, but in a corner now in possession of Gorkha, receives from its left a river named the Danda, which, rising in the plains of the Pali division, has a course of about 23 miles, the two last of which are in the lands now occupied by Gorkha.

The Ghunggi from receiving the Danda passes through these lands for about four miles, and then receives from the east a small rivulet, which forms their southern boundary, as does the Ghunggi for above two miles after this junction. It then turns south-west, passing through Lotan, and between that division and a detached part of Munsurgunj for about 10 miles. At Lotan it is a deep channel, which, in the end of January contained a rapid wide stream, but it was fordable, and had been swollen by rains, which had fallen a few days before.

At the end of the 10 miles above mentioned, the main channel of the Ghunggi turns suddenly to the west; but the original channel, called Purana-Ghunggi, winds about 10 miles to the south-east, where it is rejoined by the main stream. This, after passing four miles through the detached part of Munsurgunj, receives a river called Kungra, which has a course of about nine miles from the north and east, and is formed by the junction of the western Tinay with the Telar. About a third of its course from the junction of these two rivers, the Kungra communicates with the Mekhara by a channel named the Budhiyari.

The western Tinay comes from Butaul as above mentioned and passes for about 20 miles through the country usurped by Gorkha, where it receives several branches, all of which seem to rise from the southern face of the hills next to the plain. On coming to the boundary of what remains in the company's possession, it sends to the west a branch named Ghorhawa, which anastomoses with the Telar, and forms the boundary its whole length. After the separation of the Ghorhawa, the Tinay runs south and west 10 miles, first separating the division of Lotan from the lands possessed by Gorkha, and then passing entirely through the former. Near Kharati its channel is about 200 yards wide, and in January, before any rain had fallen, contained a pretty clear stream, about 20 yards wide and knee deep. It contains many shells and a few pebbles.

The Telar, which unites with the western Tinay, to form the Kungra, comes from the land usurped by Gorkha; and, where it reaches the present frontier, is joined by the Ghorhawa branch of the Tinay. From that place it forms for some way the present boundary between the Company and Gorkha. On coming to the boundary between the divisions of Lotan Dhuliyabhandar it is joined by the Koti, which rises in the usurped lands of Gorkha, and for some way forms the boundary between these and the division of Dhuliyabandar, that is to say in its present reduced state. It afterwards forms the boundary between this division and Lotan, until it joins the Tinay to form the Kungra. In this part of its course, where I crossed it, the channel is about 20 yards wide and the water, which extends across, reaches in January to about mid-thigh, and has a gentle stream. A rope made of

the stems of woody climbing plants is stretched across, and fixed at each end to a tree, and by this people in floods draw themselves over, there being no ferry. Where it reaches the boundary of Dhuliyabhandar, it is joined by a rivulet named Sisaya, which for some way separates the remaining part of that division, from what has been seized by Gorkha; and a little lower it is joined by the Marthi, which, after a long course through the usurpations of that people, passes through a corner of what remains to the company.

About a mile below the junction of the Kungra the Ghunggi receives the Jemuyar, which rises in the plains usurped by Gorkha, and, after some course through these, separates them from the part still remaining under the authority of the Thanahdar of Dhuliyabhandar. It then receives from its right the Mahasaing, which separates the division of Bangsi from the usurpations of Gorkha. Below the junction the Jemuyar separates the divisions of Bangsi and Dhuliyabhandar for about 12 miles, during which it receives from the former a rivulet named Dhi. Below this the channel is narrow but deep, and in January contains only some stagnant pools of water, and no stream. At the southern corner of Dhuliyabhandar the Jemuyar receives from its left a petty rivulet named Mekhara, which, as already mentioned, communicates with the Kungra by means of the Budhiyari. From the mouth of the Mekhara the Jemuyar, for about six miles, runs through the division of Bangsi to join the Ghunggi.

About six miles again below the mouth of the Jemuyar the Ghunggi receives a river called the old (Buri) Rapti, although I cannot learn, that it has any communication with that river; but it may possibly be one of its old channels. It comes to the eastern frontier of the district about 14 miles north from Dumuriyagunj, and for about nine miles forms the northern boundary of the Bangsi division. It then passes entirely into that jurisdiction, on receiving a river called Arra, which for a long way separates the lands usurped by Gorkha from the territories of the Nawab Vazir; and, for some miles before it joins the Buri Rapti, separates the latter from the division of Bangsi. The Buri Rapti, after entering this division, runs about 10 miles to the ruined town of Sanauli, where during the rainy season, it is so large, as to admit of a good deal of timber being exported. Immediately below the old

fortress of Sanauli, the Buri Rapti receives from its right a rivulet named Sikri, which has a very deep but narrow and muddy channel, although in January it contains no stream. About eight miles below Sanauli the Buri Rapti receives the Banggangga or arrow river, which comes from the lower hills of Palpa, and, after running some way through the lands usurped by Gorkha, passes about 20 miles through the division of Bangsi. Between the Arra and Bangangga is a river named the Surahi, which enters the division of Bangsi from the territory usurped by Gorkha, and soon after is lost in the marshes north from Sanauli, nor does its current reach the Buri Rapti.

Six or seven miles below the mouth of the Bangangga, the Buri Rapti receives from its left the Haha. It must be observed, that this part of the united stream is by many called the Bangangga, as most of the water would appear to come by that stream. The channel immediately below the junction is about 100 yards wide, and in January contains a pretty considerable stream, although it is fordable, but oxen cannot pass with loads, and a ferry is therefore employed to transport the goods. Timber comes down both the Buri Rapti and Bangangga. The Haha in the upper part of its course, where it separates the division of Dumuriyagunj from Bangsi, is called Parasi. Within Bangsi it receives from its right a rivulet named the Ekrari; and some way below it is known by the names of Ghaghar and Haha. It is a channel about 20 yards wide with a fine clear stream about 10 feet wide and knee deep, which in some places is raised by dams for the purpose of irrigation, and much more, than is now done, might be easily effected.

From the mouth of the Haha the Bangangga or Buri Rapti has a course of about three miles to join the Ghunggi, in which its name is lost, although it is by far the most considerable river. From receiving the Bangangga to joining the old Ghunggi the present channel has a course of almost 10 miles; and from thence, to where the Ghunggi joins the Rapti, is three miles farther. After receiving the Ghunggi the Rapti runs south, and runs in that direction for about 10 miles, during which it communicates with the lake called Bakhira, Bangrachh, or Motijhil, by two channels. The uppermost is called Gaighat; the lower, where it issues

from the lake is called Chorma, but about its middle it spreads out into a marsh called Marar, and the channel between that and the Rapti is called Ghiuha. By these large boats might enter the lake during the whole rainy season. After this bend to the south the Rapti turns west for 6 miles to Gorukhpoor; and, during this space, communicates by several channels with the Ami, and a lake called Nawar. The uppermost of these channels is called Sar, and passes direct between the Rapti and Ami, but is very inconsiderable. The next of these channels, comes from an old branch of the Rapti, and falls into the Nawar lake. It is called Sengwabhengwa. The third channel falls into the same lake, and is called Jokaha. In the rainy season boats can pass through these passages and lakes to the Ami.

A little above the town of Gorukhpoor the Rapti receives the Rohin or Rohini, which rises from the southern face of the mountains in the division of Pali, and after a course of about 20 miles is joined from its left by the Mahawe. This rises in a similar manner, and about the middle of its course is joined by a rivulet called the Pusha, which sends to its left a branch called the New (Naya) Pusha, which joins the Jharui, that will be afterwards mentioned. The Rohin, after being joined by the Mahawe, runs about 12 miles, SW. through Pali and Latan; and, where the latter division meets Nichlaul and Munsurgunj, is joined by the Payas. Between the two junctions the Rohin is a narrow channel sunk deep in a clay soil, and in the end of January contains a dirty stream knee deep.

The Payas is formed by the junction of the Jharui and Mulay rivulets. The former rises from the southern face of the hills; and soon after is joined by another rivulet named the Pangruya, and also by the new Pusha lately mentioned. Below this it is a channel deep sunk in the soil, and in its whole course, as well as its continuation the Payas, it forms the boundary between the divisions of Pali and Nichlaul. After about a third of its course it receives from its left a rivulet called Chakdahawa, which is formed by two branches, the Chandan and Bangangga. The former in February I found a fine clear stream, a very few feet below the level of the country; the other is a wide shallow stagnant channel equally well fitted for the irrigation of the fields. Somewhat

below the middle of its course the Jharui divides into two branches, which about eight miles below reunite. That to the right is named the Sigari, and that to the left is the Tengra. After the re-union the former name prevails, and continues for about three miles, when it joins the Mulay, and forms the Payas.

The Mulay is an insignificant rivulet, which rises on the plains, and communicates with the little Gandaki by a channel named the Chitari. About six miles below the mouth of the Payas the Rohini is joined from its left by the Beliya, a rivulet of considerable length, but trifling size, which rises in the division of Nichlaul. About 11 miles farther south the Rohini receives from the same side a similar rivulet named the Chiluya, the whole course of which is in Munsurgunj, as is also that of the Temar, by which it is joined from its right. From the junction of the Chiluya, until the Rohini unites with the Rapti, is about nine miles, and here the Rohini, even in spring, contains much water, so that its passage requires the assistance of ferry boats. Gorukhpoor, although a considerable town on the bank of the river navigable at all seasons, has no boats employed in any commerce except the timber trade, and very few frequent the place for any other purpose. The channel of the Rapti at Gorukhpoor seems to be about 200 yards wide; but at all seasons contains deep water. In the dry season the current is trifling, although below the town even in the heats of spring large boats can pass; but in a few places there are deep fords.

About 12 miles below Gorukhpoor the Rapti receives from its right a small channel named the Jhewura, through which the drainings of the Nandor lake empty themselves by two streams, that unite near the Rapti. In this part of its course the river begins to be more frequented by boats, and although no marts have been established on its banks, some strangers bring boats to carry away grain, and boats are built for sale, and go away loaded. Between 3 and 4 miles below the mouth of the Jhewura the Ami enters the Rapti from the same side. It is a small river fed entirely by springs from the plains of this district, but contains a copious and convenient supply of water for the use of the farmer. It rises 2 or 3 miles south from Dumuriyagunj, and after a course of about 24 miles is joined by the river Budh. In this part of its

course, so far as I saw on the road between Dumurryagunj and Banpoor, it is a small marshy channel, which in the rainy season overflows its banks to a considerable extent. About midway it receives a rivulet named the Jemuyar. The Budh rises about eight miles east from the source of the Ami, and has a course of about 16 miles, during which it is joined from the left by two rivulets, the Barar and Kanhati. The former in January contains a small clear stream, the latter contains only stagnant pools.

Below the junction of the Budh canoes can at all seasons pass up and down the Ami, and some way below the junction the channel is about 60 yards wide while in the beginning of January the water extended from side to side, and was so deep as to require my elephant to swim. The water however was nearly stagnant. In the course of four miles here it receives three rivulets. The uppermost from the right is very inconsiderable, and has no appropriate name. The next comes from the left, is called Gongra, and in January contains only stagnant pools. The third from the right is called Sikri, and is formed by the junction of the Sabkanara and Makri. About seven miles below the mouth of the Sikri, the Ami communicates with the lake of Bakhira by a channel, called Bangti, and three miles lower down it communicates with the Kudra by a channel, at first called Belariya; but which, spreading out into a kind of lake is then called Chanda Tal, and afterwards contracting, is named the Rani Tal. This channel with the Kudra and Ami surrounds a triangular space, which contains the town Magahar, and is five miles in length. The Kudra has a course of 12 or 13 miles, joining the Ami from its right. It is a small but deep channel, and in the middle of March contains stagnant pools of water, with dry spaces between.

At Magahar, the Ami in March was swollen by the rains that had lately fallen, so as to cover a slight wooden bridge; but at all seasons it requires a ferry for heavy carriages. It is alleged to rise considerably every January and February, even should there have been no rain; but not so much as this year, when much had fallen. This if correct, is a curious circumstance. The natives attribute the rise to a great quantity of aquatic plants (Cyperi, Scirpi, Sparganium,) which early in spring vegetate in the nearly stagnant water with

great vigour. I nowhere, however, saw the channel entirely filled with these plants, there were among the plots in which they grow, many clear passages abundantly ample for the stream; nor, even did the plants occupy the whole channel, are they of a nature to confine the water. Rather more than eight miles below the junction of the Kudra, the Ami from the right, receives the Jamura, and in the intermediate space has two communications with the Rapti; one by the Sar already mentioned, the other by the Sasa through the Nawar lake.

The Jamura has a course of about 44 miles from the boundary between Basti and Dumuriyagunj; but in that part of its course it is called the Gareya, and is very inconsiderable; nor is it anything enlarged in the lower part of its course. In the course of two or three miles below the mouth of the Jamura, the Ami communicates with the Rapti through the Nawar lake by two channels called Kungras. The lower, which I saw, is a channel 30 or 40 yards wide, and in March contained a great deal of stagnant water filled with aquatic plants, and had its sides overgrown with aquatic trees.

At Onaula the channel of the Ami may be 30 or 40 yards wide, and in March is filled with water from side to side. It is deep, but nearly stagnant. From thence to its junction with the Rapti are about 10 miles, in which space it receives three rivulets. The uppermost coming from the left, has no name. The other two are from the right, and are called Dogari and Karmahi. About seven miles below the mouth of the Ami, the Rapti receives from its right a rivulet named the Selani, which communicates with the Tarena by a channel named Garanggari, and this again sends a branch called Kungriya to join the Rapti, about two miles below the mouth of the Selani, which in November is a small dirty stagnant water course.

About eight miles below the mouth of the Kungriya, the Rapti receives from its left a river named the Kathne, and it must be observed, that on the opposite side of the Rapti there is a river of the same name, which implies its being fitted for boats conveying timber, although at present neither is by any means adapted for this purpose. The eastern Kathne, about 10 miles from its mouth, without any assignable reason, changes its name to Pharen; and in the lower

part of its course is a narrow but deep channel, which, where I crossed in November, was not fordable; but the ferry-men say that in spring it is not navigable.

The Pharen rises near Munsurgunj, and in that part of its course in March is a small river nearly stagnant, and deep sunk in its channel. A little below Pipraj, it receives from its right a similar rivulet named the Kaphur. About 18 miles below it receives, from the right also, a river named the Gorra, which comes from a large marshy lake that is east from Gorukhpoor, and about the middle of its course receives the Tura, which rises near Munsurgunj. It has a wide channel; but in March has no stream, and in most parts is dry. About a mile below the mouth of the Kathne the Rapti receives a small channel, which is in fact the drain from a large marshy lake called Bheri, but is called the Dewha, probably from that great river having once run in its direction. The Bheri lake receives a river named the Tarena, which in November is a pretty large but dirty stagnant water course. It has a course of about 24 miles, and communicates with the Selani by the channel Garanggri, as has been already mentioned.

Opposite to the mouth of this old Dewha, the Rapti receives a small river named the Majhane, which rises a little north-east from Mensurgunj, but is there very inconsiderable. Some five or six miles lower down, at the road from Kesiya to Gorukhpoor, it is a winding channel, which although nearly stagnant in March, contains even then a good deal of water little sunk below the level of the fields, and therefore would be highly useful to the farmer, who had industry to apply it to his fields; but its vicinity is mostly waste. About 30 miles from its source, for what reason I know not, the Majhane changes its name to Bethuya, which at Rudrapoor, although it has received no tributary stream, is a deep though narrow channel, containing in November so much water that an elephant in crossing must swim. The ferry-men say, that boats of 100 *mans* burthen can ascend at all seasons, 5 coss higher than Rudrapoor; and a good deal of timber is floated down, but no other commerce is carried on by its means. A little way below Rudrapoor the Bethuya is joined by the Kurna, which rises in the north-east part of Gajpoor, and is a small channel, in November nearly stagnant, but near the level of

the country, and overgrown with tufts of long grass. About four miles before it joins the Bethuya, the Kurna sends off the Gumaya, which joins the Rapti, about a mile below the mouth of the Bethuya. From thence the Rapti to its mouth has a course of about five miles, in which its appearance does not differ materially from that at Gorukhpoor.

Lesser Gandaki.—Although the lesser (Chhoti) Gandaki is but a small stream I have given it a separate head, because it is quite distinct from any of the greater rivers. It rises from a fine perennial spring at the bottom of the mountains in the division of Nichlaul, and is there most usually called the Buri or old Gandaki, although on account of the mountains, it is impossible that it could have ever been a channel of the greater Gandaki. After running about seven miles south-west, the Buri Gandaki receives from its right a rivulet named the Khejuri, which, like the Buri Gandaki, is a channel 15 or 20 yards wide. In February it contained much water nearly stagnant, but well fitted for irrigation. About five miles after receiving the Khejuri, the Chhota Gandaki, for so it is here called, communicates with the Mulay by an inconsiderable channel named the Chitari.

About 16 miles lower down the lesser Gandaki is joined by the upper branch of a rivulet, the nomenclature of which is very confused. It rises a little north from Nichlaul, and is there called Amu, but soon changes its name to Kekhra. About five miles south from Nichlaul the Kekhra divides into two branches, of which that to the right preserves the name, while the other is at first called Nari, but in the lower part of its course is named Ghagi, and after a course of about 10 miles joins the lesser Gandaki, as above-mentioned.

Rather more than a mile lower down the Gandaki receives the other branch of the Kekhra, which in the upper part of its course preserves that name, but changes it first to Man and then to Chamar buruyar (or drown the cobler). About five miles lower down, the lesser Gandaka receives a considerable rivulet named the Hirna, which has a course of about 15 miles. Near its source it is a small channel little sunk under the surface, and in the middle of February contained a very small stream, with a good deal of water in stagnant pools, but much rain had recently fallen. A very little below the Hirna, and also from the right side, the Gandaki receives

a petty rivulet named the Khanuya. By the various tributary streams above mentioned the lesser Gandaki is considerably enlarged. It is little sunk below the surface, and towards the end of February contained a pretty clear stream, about 40 feet wide and more than knee deep.

About 18 miles below the mouth of the Khanuya the lesser Gandaki receives, also from the right, a considerable rivulet named the Maun, which has a course of about 25 miles long, and is well fitted for the use of the farmer, as it contains in the dry season a little stream near the surface, which, by dams, may be readily turned into canals. Less than a mile above the mouth of the Maun, the lesser Gandaki divides into two branches, which reunite below, forming an island about 26 miles long and almost 10 wide. The channel to the right preserves the name Gandaki, and, as has been mentioned, receives the Maun. About nine miles lower down, the Gandaki receives from the right a rivulet named Dohar, a small dirty channel overgrown with grass, but which in November contains much stagnant water, very near the level of the country. In this part of its course, the lesser Gandaki in some parts is a channel 100 yards wide, which in March contains a clear gentle stream, 30 yards wide and 2 feet deep, running on pure sand; in other parts it is much narrower, the channel being clay, and there the water is deep, but even in November nearly stagnant and rather dirty.

About eight miles below the Dohar, the lesser Gandaki receives from its right a rivulet named the Dewrangchi, in the upper part of its course, and the Kangchi in the lower. It has a course of about 38 miles, and rises north from Munsurgunj, along with the Majhane formerly mentioned. It is there very inconsiderable. At Belawa it is a small channel, little sunk, and overgrown with tufts of long grass; but in November contains a good supply of stagnant water. The left branch of the lesser Gandaki is called the Khanuya. Near Kesiya it is a very small channel, which in March is dry. About nine miles below, where it separates from the Gandaki, the Khanuya is joined, from the left, by a rivulet named the Ghagi, which has a course of about six miles; but about two miles from its source is joined by a rivulet named the Bangri, which is 12 or 13 miles in length, but very inconsiderable in size. About eight miles below the mouth of the

Ghagi, the Khanuya receives from the left a rivulet, which has a course of about ten miles, partly in this district, partly in that of Saran, and partly along the frontier. In the upper part of its course it is named Sanda, in the lower Kesiya. The remaining part of the Khanuya is also partly along the frontier, partly in Saran, and partly in this district. At Selempoor, about six miles below the reunion of the two branches of the lesser Gandaki, this river may be 150 or 200 yards wide. At all seasons it may be navigated by canoes, although it has little current and is full of weeds, and in the rainy season boats of 1000 *mans* burthen could frequent it; but scarcely any goods are exported or imported by its means. From Selempoor to the mouth of the lesser Gandaki is about ten miles, during the last seven of which it forms the boundary between this district and Saran.

The larger Gandaki or Narayani.—This is a grand river, the most remote source of which, named Damodarkund, is beyond the snowy mountains, in the territories of a chief of Bhotan, or Thibet, named the Mastang Raja, and now tributary to Gorkha. After a long and winding course through the immense chasms between the peaks of Emodus, and through the inferior mountains, where it receives numerous tributary springs, it is joined at Dewghat by the Trisulgangga, a river larger than itself, which comes from the higher parts of the snowy mountains, north from Kathmandu. From Dewghat downwards the great river is navigable in canoes, and, in a small territory usurped last year by Gorkha, at Bhelaunji, becomes navigable for boats of considerable burthen. I have already described the magnificent scenery on its banks, between this place and where it reaches the plain; and there it seems to me to contain fully as much water as the Ganges after its union with the Yamuna at Allahabad; but as its banks are high, and as the channel in February contains water almost its whole width, the breadth of the stream in the rainy season is much less than that which the Ganges then attains. It then however acquires a formidable rapidity, which renders the navigation dangerous. In February the water is 10 or 12 feet deep, and the current, although gentle, is very strong, approaching near, but not reaching that degree of rapidity, which occasions a rippling noise. The water is perfectly clear, and the bottom consists

chiefly of large water-worn pebbles. All the upper part of the river is usually named Narayani, after the Supreme Being; or Salagrami, after stones which the Hindus worship, and which are found in its channel, from where it passes the singular fountains of flame and water at Muktanath, to where it enters the plain. It is only below this that the name Gandaki is known for this river; nor is it ever used among the mountaineers, except by such as are acquainted with the continuity of the stream, and adapt their conversation to the understanding of the people in the low country.

Lower down, I am told, there are several passes on the Gandaki that are dangerous for boats on account of stones or rocks, for the natives use the same word to express both; nor could I obtain any satisfactory information on the subject, the people here possessing no boats, nor carrying on any commerce by its means, that of timber excepted; and the boats employed in that trade come entirely from Saran.

The Gandaki or Narayani, in passing Maddar hill separates this district from lands originally belonging to the Ramnagar or Tanahung Raja; and which should form a part of Saran as belonging to Ramnagar, which paid tribute to the Company; but these lands were usurped by Gorkha, when its chief seized on the independent territory of Tanahung belonging to the Ramnagar Raja. From Maddar hill downwards, for about 23 miles the main channel of the Gandaki forms, so far as I know, the undisputed boundary between this district and Saran. About four miles below Maddar hill, the Gandaki divides into two channels, which re-unite after forming a sandy island 4 miles long and 1½ wide. The eastern channel contains the principal stream, although the western is wide, and contains many water-worn pebbles; but in February the stream that it contains is very trifling. Somewhat more than three miles below this island, the Gandaki forms another about nine miles long, and between three and four broad. The western channel there is very narrow, and is called the Khayara.

About four miles below this second island a third, and much more valuable one commences. This is about 28 miles long, and six miles wide. The great channel of the Gandaki at present passes for about 21 miles along the east side of this island, and then dividing into two, separates from the

upper part of the island a smaller portion, eight miles long and three wide, which belongs to this district without dispute; but the upper part of the island consisting of two territories, the Taluks of Labadha and Bhetaha is violently contested. A decision of the magistrate of this district has confirmed the claims of the Zemindars here; but actual possession is in favour of those of Saran. This part of the island on the west, is bounded by what is called the old Gandaki, and this until of late is acknowledged to have been the main channel of the river; but it is alleged, that wherever the main channel may go, is the legal boundary.

About 16 miles from its head this old Gandaki receives the Jharai, which rises near Parraona, and its source is a channel about 30 yards wide, and sunk very deep. In February the stream might be 20 feet wide, knee deep, and not rapid. It there receives a rivulet named the Bangri, which has a long course of 19 miles, but is very inconsiderable. After receiving the Bangri, the Jharai runs three or four miles, before it joins the old Gandaki, and, after running in its channel for about an equal distance separates again, having once been entirely distinct from this river. After the separation, the Jharai runs about 12 miles through the division of Parraona, and then enters Saran, where it continues about 17 miles; after which, under the name of Jhara or Jharai, it forms the boundary between the division of Selempoor and Saran for seven miles, and then re-enters the latter jurisdiction. After the two branches of the Gandaki unite at the bottom of the long island, its channel for six miles forms the boundary between the division of Parraona and Saran, and below this it has on both sides the lands of the latter jurisdiction.

The Rivers in general.—From what has been said in detail, it will appear that the rivers of this district differ considerably from the great torrents as they may be called, of other districts. Although their channels, except those of the Ghaghra Rapti and Gandaki, are not to be compared in size with those of many rivers in Bhagulpoor and Behar, their streams are in general perennial, and they are thereby considerably more valuable for agriculture and commerce, although the natives have availed themselves very little of the advantages, which they offer for either purpose. The difference that exists

between the rivers of this district, and the torrents of the Vindhyan mountains, arises from the springs in this district being fed from alpine sources, while those of the south depend almost entirely upon the periodical rains. The frequent anastomoses* in the small rivers of this district seem to arise from its greater flatness. The direction of the current in the channels forming these anastomoses is very uncertain, running at one time one way, and at another time in the contrary direction, according as more or less rain has happened to fall at the sources of the rivers which they connect.

Lakes and Marshes.—In this district pieces of water that never become dry, are very numerous; but in general they do not entirely resemble either the lakes or marshes of Europe. They have however, a stronger resemblance to the former than to the latter. In the rainy season they are of great extent and pretty deep; but even then they are in many parts hid by reeds, some aquatic trees, and many aquatic herbs. As the long dry season advances, their size contracts greatly, and, except in a few parts they become very shallow, and in many dry, while every day they are more and more obscured by the vegetation. This consists partly of reeds (*Arundo*), and other grasses (*Panicum*, *Oryza*), rushes (*Alisma*, *Damasonium*, *Sagittaria*), cyperus, scirpus, sparganium, bushes (*Aeschynomene*, *Rosa*), and trees (*Baringtonia*, *Cephalanthus*), all of which project above the water; partly of water lilies (*Nelumbium*, *Nymphea*, *Manyanthes*), whose leaves float on the surface, partly of plants that float entirely detached (*Pistia*, *Salvinia*, *Azolla*), and partly of numerous herbs that grow under water (*Valisneria*, *Serpicula*, *Chara*, *Potamogeton*, *Aponogeton*, *Zannichelia*, *&c. &c.*) In their great inequality, of size at different seasons, and in the ill-defined state between land and water, which the shallower parts of most of them overgrown with projecting plants offer to the view, these pieces of water differ from the well-defined lakes of Europe; but they differ also much from bogs or marshes in having nothing offensive or sinking on their sides and bottoms, which notwithstanding the immense quantity of vegetables and animals that they contain, consist of a fine clay,

* Branching off and running into each other, as the blood-vessels of the body do.—[Ed.]

which immediately on being exposed to the air becomes firm, nor does it ever emit any offensive vapours. The vicinity of these pieces of water is therefore perfectly healthy.

THE AIR AND WEATHER.—As might be naturally expected, the climate bears a much stronger resemblance to that of Puraniya than to that of the western provinces near the Ganges. Its southern parts, however, enjoy the pre-eminent advantage of being very healthy, and are perhaps as much so as any of the hot climates of Asia. The winds in general are either from the east or west; and, when the wind, which is most prevalent, changes, it does not draw round gradually by the north or south, but comes at once from the direction contrary to that which is prevalent, a short calm only intervening. The west winds are the most prevalent from the middle of February to the middle of June. The east winds then become the most prevalent until the middle of October. During the remainder of the year the east and west winds are nearly balanced, and they are not so strong as during the months when the winds blow more regularly from one quarter. In most parts north or south winds are only known occasionally with falls of rain. The latter, when they happen from the middle of August to the middle of September, do much injury to the crops. In the immediate vicinity of where the larger Gandaki issues from the hills, its channel there, and that of the Trisulganga running north and south, a north wind is by far the most prevalent, especially in the morning. Even the trifling channel of the Tinay is able to occasion an alteration in the course of the wind, and I am assured that at Butaul there is every morning a north wind. The lower part of the Gandaki turns so much to the east that it produces no alteration on the winds of the parts adjacent to its banks. In spring as usual in the north of India there are strong squalls, which most commonly come from the north-west; but some of them this season came from the east.

The periodical rains usually continue from the middle of June to the middle of October, and are less liable to fail than in Behar and the western provinces, so that the crops of rice are much more certain, and the certainty, it must be observed, increases more and more, the nearer to the hills the place is situated. Rain from the middle of October to

the middle of November is considered as desirable; but seldom happens. Rains in the cold season are much more frequent than in the southern and western parts of Behar, and usually follow east winds. They in general do good to the winter crops; but produce very little spring. This year in February the falls were very copious, and the climate was exceedingly mild, the thermometer never, so far as I saw, sinking below 55° at night, and rising to 76° in the day, yet on the bare pastures scarcely the least vegetation could be observed, and the leaves were falling from many trees; towards the end of March, however, some verdure was observable in the south; and in the north it is said to be very considerable throughout the heats of spring, the vicinity of the hills affording more moisture than prevails in the south, where the verdure of March in a great measure disappears, as the parching winds arise in April. The squalls of spring are seldom accompanied by rain or hail, nor does the latter fall with the showers of winter, so that it is an uncommon phenomenon. Fogs are not more common than in Behar, and occur chiefly in winter. In the southern parts dews seldom occur after March, and are never copious; but near the hills they are abundant, and continue through spring.

The heats are nowhere so intense as on the banks of the Ganges, and they are more and more moderate the nearer you approach to the hills. Even at Gorukhpoor the east winds of spring are not hot and parching, and near the hills even with a west wind the nights are cool. The people every where allege, that their crops are occasionally injured by frost; but I observed nothing approaching to that temperature. In winter, however, when the west winds blow for some days strong, the air becomes sharp, and water, exposed after boiling, is readily converted into ice; but such weather is not more common than in the vicinity of Calcutta.

Gorukhpoor, although near a large marsh, and although surrounded by woods, is one of the most healthy stations which we possess, and the sepoys on duty have nowhere been more exempt from sickness. This degree of salubrity is supposed to extend in a line parallel to the hills and Ghaghra, and the nearer the place approaches to the latter it is the more healthy, while the nearer to the hills any place is, it is the more liable to fevers. This is directly the reverse of

what is agreeable to the feelings of an European at least; to whom the climate at all seasons appears the more mild and temperate, the nearer he approaches the mountains. The circumstance also is very different from what occurs in Behar, where the immediate vicinity of the great river is much less healthy than the interior of the country. Neither can the healthiness of the southern parts of this district be accounted for by its being better cleared, as woods exist there fully as much as in the north. Indeed I suspect, that we are yet far from having discovered the circumstances upon which the relative salubrity of different countries depend. It would seem, however, to be pretty generally the case in warm climates, that low lands near mountains, occasion very numerous fevers, for it is not the mountains themselves that are adequate to produce this disease. Many of the hills in India are indeed worse than the plains near them. All the hill-forts in the south of India are I believe of this nature; and Rautas is said to have been terrible to every one not born on the place; but Ajayagar and Kalingjar in the same range of mountains, and without any apparent cause of difference, have by our troops been found uncommonly healthy. The mountains also to the north of this district are extremely salubrious, and a few hours ascent removes one entirely from the danger of the bad air, which prevails at their foot, and is called the Aul.

It must however be farther observed, that the same place at different periods is subject to considerable variation in the degree of salubrity which it enjoys; and that, without any very evident reason, a place for a series of years changes from healthy to sickly, or from sickly to healthy.* Thus within the memory of man Calcutta and the country south from it were much more unhealthy than the vicinity of Moorshedabad; but for a good many years the case has been entirely reversed. With regard to the relative salubrity of different parts in this district, it must be farther remarked, that, *cæteris paribus*, the western parts seem to be healthier than the eastern; and I believe the same remark may be extended all the way from the Sarayu to the Brahmaputra.

* This has been particularly remarked in the West India Islands.—[Ed.]

CHAPTER II.

HISTORICAL AND TOPOGRAPHICAL NOTICES OF THE DISTRICT OF GORUKHPOOR.

This district forms a considerable part of the territory, which in ancient legend is called Maha Kosala. In the Desmala of the Sakti Sanggam Tantra this is stated to extend east from Gokarnes, a temple near Pilibhit; west from the Gandaki, north from the Ganges, and south from the hills of Mahasurya. According to the Bangsalata composed by Udayanacharya, one of the great doctors most successful in establishing the authority of the modern Brahmans, Kosala extends north from the Vindhyan hills, or those south from the Ganges, south from Himadri or Emodus and the Airawati or Rapti. He does not mention the east or west boundaries, and as the Airawati runs nearly south from Himadri, the geographical ideas of this great luminary have been rather confused. He was probably however right in extending the limits of Kosala across the Ganges to the Vindhyan mountains, as, in travelling through that country, I could hear of no ancient division of territory, that intervenes between Kikat, extending to the east side of the Karmanasa and Malawa, which extends east to the Yamuna in the lower part of that river's course.

This very extensive and fertile region has always been considered as the proper patrimony of the family of the sun, as it is called, which for a very long period governed large portions of India, and at times produced its paramount lords. The history of the Hindus has been thrown into such confusion by an attempt to reconcile the actual succession of their princes with a modern system of astronomy, as most ably explained by Mr. Bentley in the eighth volume of the Asiatic Researches, that the utmost difficulty attends all attempts to reconcile with any thing like reason such ancient accounts as have been preserved in the monstrous and modern legends called the Purans. The difficulties attending this subject may be fully appreciated by examining the dif-

ferent attempts of Sir William Jones in the second volume, of Major Wilford in the fifth volume, and of Mr. Bentley in the eighth volume of the Asiatic Researches, although in the latter the real source of the difficulties seems to have been fully discovered. Still, however, many great difficulties exist, which these authors have not fully explained, and of which the two first do not seem to have been fully aware. Sir William Jones seems, without examination, to have adopted the account given of the Indian dynasties by Radhakanta, in his Puranartha-prakasa, as the doctrine generally received by the Hindus on the subject, and alleges (Asiatic Researches, vol. 2, page 26), that it begins with an absurdity so monstrous as to overthrow the whole system, he then endeavours to turn the whole of the early pedigree into an allegory, denying altogether the existence of many princes, because their names signify light, sky, sun, moon, and so forth; although he might have considered, that such names are sometimes used for men among ourselves, and among the present Hindus are very common. The grand objection to the system of Radhakanta is, however, his having adopted as a maxim, that there was always a supreme king of each of the families of the sun and moon, so that India, according to him, was governed like Lacedæmon, by two chiefs of two families possessing equal power; and that each dynasty contained exactly the same number of generations in the respective periods, into which the history is divided. This is a fable like many others, usually called opinions universally received among the Hindus, which Mr. Bentley (Asiatic Researches, vol. 8, page 244) so justly exposes. But the receiving it, as an universally acknowledged opinion, led Sir William Jones, from the imperfect lists composed by Radhakanta, to doubt whether any such personages as the Indian princes of the families of the sun and moon existed (Asiatic Researches, vol. 2, page 131). Had Sir Willam consulted the various genealogies contained in the different Purans, he would have found, that this opinion, by which he was staggered, rested entirely on the imagination of Radhakanta, or of some person from whom he borrowed it, and could not be supported by the remains of history in the Purans. So far as I can learn from Pandits, that I have employed to extract the Hindu genealogies from their books, there was only one

paramount king admitted at a time, and in general the succession to this power was totally irregular, not only between the two great families, but among the branches of the same family, and, as I have mentioned in the account of Shahabad, was as irregular as the succession in Ireland during the government of the families descended of Heber and Heremon. It would even appear, that the succession to the supremacy was not strictly confined to the two families of the sun and moon, as Pandu and his successors were in fact descended of Vayasa; and also that many intervals occurred, in which no one king possessed paramount authority.

The table given by Major Wilford is highly valuable; although, when he says, that it is extracted from the Vishnu Puran, the Bhagawat, and other Puranas, without the least alteration whatever, we are only to understand, that Major Wilford made no alteration on the table, after it was extracted by his assistants from the Hindu records; for the genealogies contained in the different books, to which he alludes, differ so much from each other, that no one table could be constructed from them without making numerous alterations. This interesting table is however exceedingly valuable in showing how nearly these genealogies, by taking the human age at a just valuation may be reconciled with the real eras pointed out by Mr. Bentley, on astronomical data. It must however be evident, that both systems are liable to some doubt. In the first place there is a very great difficulty in establishing any calculation upon the number of generations contained in the Hindu genealogies, owing to the very great carelessness, with which they have been constructed. Besides numerous transpositions it would seem, that in many parts, what in one Genealogy is detailed as a succession of several generations, is given in another genealogy as a list of brothers, so that by the former process the length of a dynasty is monstrously enlarged. Again in some genealogies a whole dynasty is represented by a single name, which occasions the most absurd anachronisms to be commonly received as canonical, by such as have studied only a part of these genealogies. These anachronisms are so distressing, that some learned persons have considered as quite vain the attempt of founding any thing like a regular chronology on the Hindu genealogies. I hope however, that this judgement is too harsh, and that a

careful perusal of all the remains may lead to something as satisfactory as chronologies of equal antiquity usually admit. So far as I can at present judge, for I have not yet procured any thing like a full copy of the genealogies, the eras, even as curtailed by Major Wilford and Mr. Bentley, would require to be considerably reduced. I consider it necessary to reduce the former from the numerous interpolations of brothers and collaterals in place of sons. The argument of Mr. Bentley goes only to show the manner, in which some former systems of chronology, detailed in the Graha Mungjari, have been deformed by the present system of Varaha Mihira; but these ancient systems were also mere astronomical fictions, and, although their application to history was not attended with such monstrous difficulties, as the present system, there is nothing in its nature to show, that it is in any degree connected with what actually happened. One great difficulty occurs relative to the deluge, which Mr. Bentley and Major Wilford agree in placing immediately before the government of the family of the Sun in Kosala commenced, so that they consider the government of Swayambhuwa and his successors, kings of Vithora (Betoor Rennell) near Kanpoor, as in the antediluvian age, while Swayambhuwa they call Adam, and Vaiwaswata father of the first king of Kosala, they call Noah. One of the legends, on which this opinion rests has been given by Sir William Jones (Asiatic Researches, vol. 2, page 117); but this, as explained by the Pandits, whom I have consulted, is not reconcilable with the opinion above mentioned; and these Brahmans insist, that no general deluge (Pralaya) has taken place since the time of Swayambhuwa. The mistake consists in supposing, that Satyabrata (Satjavrata) and Vaiwaswata are the same person, and that whatever is related of one, may be attributed to the era of the other. But the Brahmans say, that these two personages, although the same soul in different transmigrations, lived at very remote periods, Satyavrata having been saved in an ark by God, when the deluge happened, while in his subsequent birth as Vaiwaswata, after an interval of many ages, he became a lawgiver (Manu or Mamu), and founded the city of Ayodhya. It must be farther observed, that although the legend concerning the escape of Satyabrata or Satyarupa has a strong resemblance to the history of Noah, he is far from being

considered by the Hindus as being like Noah the second father of the human race; but he is said to have died without children, and was born again in the family of the Sun; while Lwayambhuwa was created to people the world after the deluge; and from him were descended the first kings of India, who governed at Vithora, and who were perhaps natives, although it is possible, that they may have been Assyrians. In place therefore of allowing the family of the Sun to have governed from the time of the deluge, and that the Treta yug or silver age extended to that event, we must, I imagine, allow the golden age or Satya yug, and the government of the descendants of Swayambhuwa to be subsequent to that period, and of course must bring the time, when the kingdom of Kosala was founded, much latter than Major Wilford and Mr. Bentley do. Could we depend on the accuracy of the numbers, as SirWilliam Jones observes, there is a circumstance mentioned by Abul Fazil, that could throw much light on this subject. It would appear that, the Brahmans, whom that person consulted, had not always applied to the history of their princes the astronomical fictions of Varaha Mihira, and they placed the birth of Budha, I presume the grandson of Atri, and son in law of Vaiwaswata first king of Ayodhya, in the year 1366 before the birth of Christ (Asiatic Researches vol. 2. p. 125). This entirely coincides with the opinion I have above stated, and places the commencement of the historical silver age, commencing with Budha, in the 1366th year before Christ, in place of the 2204th as given by Mr. Bentley from the astronomical systems of the Graha Mungjari. Such a reduction on the era of the silver age, and foundation of the kingdom of Kosala I am far from thinking absolutely necessary; but on the whole I am inclined to believe, that it approaches nearer the truth than the systems of Major Wilford or Mr. Bentley, although I must confess, as I have mentioned, that the coincidence of the two systems, founded on principles totally different, affords a strong presumption in favour of the result.

In Hindu legend the appearance of certain persons named Brahmadikas created by God, and commonly called the progenitors of every living thing, forms a remarkable era, but the accounts concerning these personages are totally dissonant, as may be seen in the account of Major Wilford (Asiatic

Researches, vol. 5, page 246). One authority makes the three sons of Swayambhuwa to have been the Brahmadikas, placing them thus at the commencement of the golden, and not at the beginning of the silver age; and I have already stated my opinion, that these were the aboriginal inhabitants or earliest conquerors of India, but other authorities give another class totally different, and always containing Marichi, Atri, Anggirasa, Pulastya, Pulaha, Kritu, and Vasishtha, while others add Daksha, Bhrigu, and Narada. The descendants of these personages governed India both in spirituals and temporals from the commencement of the silver age until about the time when the Greeks made their appearance, and numerous chiefs still claim to be of their families. They are all called Brahmans, either as being created by the God of that name, or perhaps more probably as being persons more intelligent than those who preceded them; for far from being all of the sacred order, the greater part of their descendants were princes, statesmen and soldiers, and one in particular is stated to have been a merchant (Vaisya.)

We have seen that Swayambhuwa, the founder of the kingdom of Vithora, by the whole of what is called the golden age (Satya yug), preceded Vaiwaswata, the founder of the kingdom of Kosala, and the latter was the great grandson of Marichi, while Budha, who founded the adjacent kingdom of Kuru, and reigned at Pratisthan, opposite to Prayag, about the same time with Vaiwaswata, whose daughter he married, was the grandson of Atri. I look upon these Brahmadikas, therefore, as the leaders of a colony, which at the end of the golden age, settled in India, and assumed the name of Brahmans, as being farther advanced in the arts than the descendants of Swayambhuwa, its more early princes. I look upon it also as probable, that these personages came from western Asia, introducing with them the Sangskrita language, generally admitted to be radically the same with the Persian dialect, while the languages spoken among all the rude tribes that inhabit the fastnesses of India, and which are probably remains of its ancient tongue, have no sort of analogy to the languages of the west. In the history of Kasmira, preserved by Abul Fazil, Kasyap, who was the son of Marichi, is said to have introduced the Brahmans (that is, a colony of civilized men) into that country, and the traditions of Behar state, that

he there founded a city, of which I was shown some of the remains. These no doubt were of much later date than the time of Kasyap, although he may have been the founder of the city to which they once belonged. One of the sons of Kasyap, named Viwaswa, is supposed to be now the deity presiding over the sun, owing probably to his having introduced from Persia the worship of that luminary, and, from flattery, his descendants were usually called the family of the sun (Suryabangsa). His son Vaiwaswata, who, in a former transmigration, had been Satyabrata (perhaps Noah), founded the kingdom of Kosala, long one of the most powerful in India, and built the city of Kosalapoori, or Ayodhya.

If I am right in supposing that Budha was born about 1366 years before Christ, he being the son-in-law of Vaiwaswata, it is probable that this prince may have been born about the year 1399, and we may allow him to have been 33 years old when he founded Ayodhya, and the kingdom of Kosala. In the genealogies may be found several different lists of his successors, who are commonly supposed by Pandits to have succeeded each other from father to son, by right of primogeniture, nor did one prince fail to leave his kingdom to his eldest son for many generations (Asiatic Researches, vol. 2, p. 130). This, however, seems to be a mere supposition taken for granted, because in some of the genealogies the names follow each other without any remark, for the direct line failed in Ambarisha, and went to the descendants of his brother; and Bharata usurped the government for 14 years from his elder brother Rama. The genealogies differ so much in the names, number of persons, and order of succession, that without a very careful examination of all that is to be found concerning each person, little reliance can be placed on the particulars, although it is evident, that these genealogies have been taken from some common source; and I have no doubt, that a careful examination would enable the intelligent antiquary to remove many difficulties and contradictions, that now appear.

Far from the princes of Ayodhya having enjoyed an uninterrupted succession of supreme power for numerous ages, and from father to son, very few of them would appear to have been Chhatradharis, or lords paramount of India; and there is even reason to suspect, that the family at different periods was subject to great disasters, and repeatedly lost the domi-

nion of even Kosala. The learned of Ayodhya informed the Pandit of the Mission, that their city had been three times destroyed, and that on these occasions all the people were carried to heaven with their Rajas Harischandra, Ambarisha, and Rama. The successors of these princes again collected people to occupy the city. The Pandits, whom I have employed, have not been able to trace the passages in which the two first catastrophes are mentioned; but the third is known to every one. Several traditions, however, that I have heard, confirm the opinion of Harischandra having been expelled from Ayodhya, as he is said to have removed the seat of government to Ellora, while his son Rohitaswa lived at Rautas, and his grandson founded Champa, at Bhagulpoor, in Bengal. That Ambarisha also met with some misfortune, is probable; as in the Sri Bhagwat, he is not succeeded by his son, and the line is carried on by Sindhudwipa, his brother, while in the Bangsalata, his immediate successor is Ritaparna, who, according to the Sri Bhagwat, was the grandson of Sindhudwipa, and until the time of Ritaparna, it is probable that the family did not recover from its misfortunes. The severe treatment of his wife Sita, is said to have induced that princess to excite her sons to rebel against their father Rama, and this, more probably than his piety, sent him and his adherents to heaven. Ayodhya, however, was rebuilt by the son Kusha, who left a numerous offspring, that held the city until the reign of Vrihadbala. From Vaiwaswata to Rama, inclusive, the Sri Bhagwat reckons 55 princes, the Mahabharat reckons 69, and the Bangsalata 78; but the Ramayana of Valmika reckons only 36. This being it is supposed by far the most ancient account, is probably the most correct, and we may suppose it to be free from the interpolations of collateral successions and dynasties introduced by later writers, and to be the actual succession of the kings of Ayodhya; unfortunately Valmiki gives no list of Rama's successors, and the Purans, as usual, are filled with numerous discordances. Vrihadbala, killed by Abhimanya in the great war at the commencement of the iron age, was one of the most remarkable successors of Rama. According to the Sri Bhagwat, he was the 27th in descent from Rama. In the Mahabharat he is the 33d, and in the Bangsalata he is the 25th. As, owing to similar causes, these numbers are probably as much increased as the prede-

cessors of Rama, the number of princes, taking the scale of the Sri Bhagwat, reduced by that of Valmiki, as a guide, from Rama to Vrihadbala may have been 17, or from the commencement of the silver to the commencement of the iron age, 53 princes, which, if they were also generations of 3 to a century, would give a duration of 1766 years. There is no impossibility in admitting such a duration; but I think, as I have said, that in all probability it must be reduced. Major Wilford (table in 5th vol. of Asiatic Researches) has found in the Purans, 59 princes from the time of Rama to that of Chandragupta, contemporary nearly with Alexander. Reducing these by the scale of Rama's predecessors, we shall have 31 princes, which added to Rama and his predecessors, will give in all 67 princes. If these commenced their government 1366 years before Christ, and ended it 300 years before this event, there will be on an average about 15½ years for each prince, which can only be understood of reigns, and not of generations. On these grounds, Vaiwaswata being placed in the year before Christ, 1366, Rama will be placed in 775, and Vrihadbala, or the commencement of the historical iron age, in the year 512. But, if the antiquary prefers with Major Wilford to consider these 67 as generations, we must double the length of each period; that is, we must say, that Ayodhya was founded 2732 years before Christ, that Rama flourished 1550 years before that event, and that Vrihadbala was killed in the 2024.

It must be observed, that in the Purans, little amplification seems to have been made in the family of the moon, as from Budha, one generation after Vaiwaswata, to Krishna, contemporary with Vrihadbala, the Sri Bhagwat reckons 55 persons, a difference of only two persons from that which is given by the correction that is required in the list of the family of the sun, by comparing Valmiki with the Sri Bhagwat; and this coincidence, I consider as in a great measure proving, that the nature of the correction which I have adopted is not subject to material error, so far as relates to the number of successions; but it decides nothing as to the point of whether we are to consider these as reigns or as generations.

The people of Ayodhya imagine, that after the death of Vrihadbala, their city was deserted, and continued so until the time of Vikrama of Ujjain, who came in search of the holy

city, erected a fort called Ramgar, cut down the forests by which the ruins were covered, and erected 360 temples on the places sanctified by the extraordinary actions of Rama, of his wife Sita, of his brother Lakshman, and of his general Mahavira. The only foundation probably for such a tradition is, that Vikrama may have erected some temples, and that in the Mahabharat the genealogy of the family is continued no lower than the time of Vrihadbala, as being foreign to the subject of the book; but in the Sri Bhagwat Vrihadbala is succeeded by 29 princes, and in the Bangsalata by 24. These, taken according to the scales of Rama's predecessors in Valmiki and the Sri Bhagwat, would give 18 princes, and this will give us 279, or 558 years, according as we call these successions reigns or generations, bringing the existence of the family down to the time nearly of Alexander; but none of the latter princes rose to considerable power, and they were vassals of the kings of Magadha. Their existence, however, throws a great doubt on the whole story concerning Vikrama.

This Vikrama is usually supposed to have been the personage from whom the era called Sambat is derived, and, according to the reckoning used in Kosala, this era commences 57 years before the birth of Christ, so that the city had been then deserted about 280 years. How the places remarkable for the actions of the God could be traced after such a long interval, and amidst the forest, seems rather doubtful; and the doubt will be increased, if we suppose that the latter Vikrama, the son-in-law of the Emperor Bhoj, was the person who constructed the temples at Ayodhya. This I am inclined to think was probably the case, for although Rama was probably worshipped before the time of the elder Vikrama, yet his worship, as that peculiarly distinguishing a sect of bigots, seems to have been first established by Ramanuja about the time of the latter Vikrama, who may from thence be supposed peculiarly eager to discover the traces of the deity of his own sect. Unfortunately, if these temples ever existed, not the smallest trace of them remains to enable us to judge of the period when they were built; and the destruction is very generally attributed by the Hindus to the furious zeal of Aurungzebe, to whom also is imputed the overthrow of the temples in Benares and Mathura. What may have been the case in the two latter, I shall not now take upon myself to say, but with respect

to Ayodhya the tradition seems very ill founded. The bigot by whom the temples were destroyed, is said to have erected mosques on the situations of the most remarkable temples; but the mosque at Ayodhya, which is by far the most entire, and which has every appearance of being the most modern, is ascertained by an inscription on its walls (of which a copy is given) to have been built by Babur, five generations before Aurungzebe. This renders the whole story of Vikrama exceedingly doubtful, especially as what are said to be the ruins of his fort, do not in any essential degree differ from those said to have belonged to the ancient city, that is, consist entirely of irregular heaps of broken bricks, covered with soil, and remarkably productive of tobacco; and, from its name, Ramgar, I am inclined to suppose that it was a part of the building actually erected by Rama.

Although I did not fail to visit the place, and whatever the Hindus reckon remarkable, I did not choose to take any measurements, so as to draw with any accuracy a plan of the space which the ruins occupy, as the doing so might have given offence to the government of the Nawab Vazir, in whose territory, separated from this district only by the river Sarayu, they are situated.

I may in a general manner observe, that the heaps of bricks, although much seems to have been carried away by the river, extend a great way, that is, more than a mile in length, and more than half a mile in width: and that although vast quantities of materials have been removed to build the Muhammedan Ayodhya or Fyzabad, yet the ruins in many parts retain a very considerable elevation; nor is there any reason to doubt, that the structure to which they belonged, has been very great; when we consider, that it has been ruined for above 2000 years. None of the Hindu buildings at present existing are in the least remarkable either for size or architecture, and they are all not only evidently, but avowedly, quite modern, that is, they have been all erected since the reign of Aurungzebe, or most of them even within the memory of man. Although they are built on what I have no doubt are the ruins of the palace that was occupied by the princes of the family of the sun, their being built on the spots, where the events which they are intended to celebrate, actually happened, would have been extremely doubtful, even had the elder Vikrama built

temples on the various places which had been destroyed by Aurungzebe, so that that the spots selected by Vikrama might be known by tradition; but the whole of that story being liable to strong suspicion, we may consider the present appropriation of names to different places as no better founded than the miracles, which several of them are said to commemorate.

It is said that in digging for bricks many images have been discovered, but the few which I was able to trace were too much broken to ascertain what they were meant to represent, except one at the convent (Akhara) of Guptar, where Lakshman is supposed to have disappeared. This represents a man and woman carved on one stone. The latter carries somewhat on her head, and neither has any resemblance to what I have before seen. The only thing except these two figures and the bricks, that could with probability be traced to the ancient city, are some pillars in the mosque built by Babur. These are of black stone, and of an order which I have seen nowhere else, and which will be understood from the accompanying drawing. That they have been taken from a Hindu building, is evident, from the traces of images being observable on some of their bases; although the images have been cut off to satisfy the conscience of the bigot. It is possible that these pillars have belonged to a temple built by Vikrama; but I think the existence of such temples doubtful; and, if they did not exist, it is probable that the pillars were taken from the ruins of the palace. They are only 6 feet high. There is a Siva-

lingga called Nageswar, which is called on by all the pilgrims to witness their faith, when they have performed the usual ceremonies; and this is supposed to be the oldest image of the place. As Lakshman the brother of Rama is supposed to have founded one of the orders of Yogis, there is a probability that the great God was a principal object of worship at the court of his brother, and this image may actually have then existed, as from its form, if kept from the weather, it may have lasted from the first origin of things; but it leads to no conclusions, and may be of very modern date. Could we believe what is said of the chief objects of worship now at the place, they would be of singular curiosity. They are images said to represent Rama, Lakshman, and Sita, made by the first personage, and thrown by him into the Sarayu, when he was about to proceed on an expedition to the Indus. In modern times they were divulged to a fortunate merchant by the ordinary course of dreaming. He drew them from the river, and built a temple for them, which was destroyed by Aurungzebe, but the images were allowed to escape, and Ahalya, the widow of Holkar, lately built for them a small temple, which is only opened at peculiar times, and only to the faithful. Setting aside the dream, the escape of the images from Aurungzebe, as they are made of gold, renders the story very problematical. They are about a span high, and were so covered with flowers, and shown in so dark a place, that my people who went to worship could form no opinion either as to their shape or materials.

I procured a good many old copper coins, and many were said to be of the Hindu kings; but on examination, except two, all appear to contain Arabic inscriptions, but in very old characters, and I had seen similar ones at Agra. One said to have been found in the Sarayu retains a defaced figure in the human form; and another the figure of a lion. These are probably Hindu coins, but they contain no legend, nor any thing to indicate that they belonged to princes of the familyof the sun.

The person who finally expelled the family of the sun from Ayodhya, is not stated by tradition, nor, so far as I can learn, in legend, but the learned of this district have heard of the dominion of the Cheros, although this impure tribe has here left no monuments of its power, the place being far removed from the seat of government.

Although Kosala is usually said to have been the peculiar patrimony of the family of the sun, yet it would not seem to have entirely belonged to the kings of Ayodhya, nor even to collateral branches of that family; for it would appear that Benares, even during the height of their power, belonged to a Kasi Raja, from whom the town probably derived its origin, although its worshippers pretend that it has existed from all eternity, and through all the changes which the world has undergone. This Kasi Raja, according to the Sri Bhagwat, was the sixth in descent from Budha, ancestor of the family of the moon, whom I have supposed to have been born 1366 years before the birth of Christ. In the same work is contained a dynasty of many princes, the descendants of Kasi, and all considered as Rajas of that place; but the number of princes is totally inadequate to reach to the time of Krishna, by whom a Kasi Raja was killed; for from Budha the common ancestor, to Krishna inclusive, according to the Sri Bhagwat, are 55 persons; while from Budha to the last Kasi Raja, named Bhargabhumi are only 23, and in the Bangsalata there are only 21. In Mahabharat however, the genealogy is given at greater length, and is extended to 31 generations. I think, that here generations must be allowed, because Gandini, daughter of Vibhu, one of these Kasi Rajas, and 26th in descent from Budha, was married to Saphalka brother of Biduratha; the ancestor of Krishna in the ninth degree; but Saphalka being the 48th in succession from Budha, and his wife the 27th generation, coincide remarkably well. At the same rate 31 generations would place Vatsabhumi the last Raja in the list of the Mahabharat, 854 years after Budha, and in the time of Krishna.

The name of the Kasi Raja killed by Krishna is no where mentioned, but it may very likely have been Vatsabhumi. His death by no means put an end to the dynasty, and he left a son named Sudakshina, who revenged his father's death by burning Dwaraka the stronghold of Krishna. He again retorted by burning Kasi. No more mention it is said, is made of this family in the Sri Bhagwat, where this story is contained; but it is probable, that the family may have continued for some time longer, and their dominions are said to have extended from Benares, all the way to the hills, so that they possessed all the south and east sides of Kosala. To confirm

this opinion, there are in the eastern parts of this district several monuments attributed to a Kasi Raja, and as there are among these monuments two large fortifications, we may suppose it to have been here that Sudakshina retired, when his capital was destroyed by Krishna. A common tradition however, here is, that the Kasi Raja, who occupied these fortresses, was named Vasishtha Singha, a younger brother of the Ayodhya family, who attacked the chief of the family of the moon, that held the holy city, and seized his dominions. After some time however, this branch of the family of the moon recovered its ancient capital, and drove Vasishtha to the north-eastern part of the principality, where he attempted to establish a new Kasi, near what is now called Rudrapoor; but the place in former times was called Hangsakshatra. A Pandit of Bhewopar says, that an account of these transactions is contained in the Brahma Sarbaswa Sanghita, and he refers them without doubt to the time of the princes of Ayodhya, who succeeded Vrihadbala, that is, according to my theory, between the 512th and the 280th year before the birth of Christ.

It must be observed, that the city of Kasi seems early to have been granted to a collateral branch of the family of the sun, and I am told, on the authority of the Kasikhand, a part of the Skanda Puran, that it was held by Dewadatta or Diwodasa, the son of Urusrawa, the ninth in descent from Vaiwaswata. Diwodasa having erected a temple of Budha, at what is now called the proper (Nij) Kasi, which city for many ages continued a chief seat of that worship, the great God was offended, and Kasi was transferred to the family of the moon; but, if we may judge from the monuments in this district attributed to the Kasi Raja of the Ayodhya family, this illustrious race would appear to have all along retained the same heresy, and were no doubt followers of the Budhas, although all the sects of this religion previous to Gautama, would seem to have admitted the worship of the Dewatas, and especially of the great God.

Notwithstanding what the Pandit of Bhewopar says, most people attribute the monuments in this district to the Kasi Raja, who contended with Krishna. Both the fortresses are generally attributed to the same person, and are called Sahankot; but this implies only, that they were fortresses belonging to a mighty personage. Some indeed attribute

one of these forts, which is in the Munsurgunj division, to a chief of the Sakarwar tribe, who, they say, held the Satasi Raj before the Sirnets, by whom it is now possessed. It is also said, that the first Sirnet chief succeeded by marrying a daughter of the last Sakarwar, who had no male issue. The works however seem much larger than those that have been left by any of these pure tribes, who are now in possession. Even the Kasi Rajas did not enjoy their share of Kosala without competitors. A Brigumuni, one of the seven Rishis usually alleged to have been created by Brahma at the commencement of things, is said to have held Dadri or Dardara on the banks of the Ganges, where he performed his ceremonies, on the spot called Bhriguasram or Bhadrason (Bagerassan, Rennell), while his family dwelt at Bhargapoor, now called Bhagulpoor in this district. The idea, that these persons called the seven Rishis were all of the most extreme antiquity, and coeval, seems to have arisen from confounding them with the seven Brahmadikas before-mentioned, and the reason of this confusion seems to be that two of the seven Richis, Atri and Maridhi, were also Brahmadikas; but Bhrigu must be referred to a latter age. His son was Sukra his Richika, his Jamadagni, his Parasurama. The family we may readily suppose continued in possession of the country so long at least, as some monuments near Bhagulpoor are attributed to the last-mentioned person, one of the incarnations of Vishnu, who was a universal conqueror. He is usually placed before Rama Chandra; but this opinion is scarcely tenable, and seems to have arisen from the shortness of the genealogy between him and Bhrigu, supposed to have been contemporary with Marichi, the ancestor of Rama. But Viswamitra, the spiritual guide of Rama, had a sister, who was married to Richika the grandfather of Parasurama, who must therefore have been nearly contemporary with but later than Rama; and Viswamitra contemporary with Richika grandson of Bhrigu, one of the seven Rishis, according to the Sri Bhagwat, was descended of Atri one of the Brahmadikas in the 16th degree, while the first Kasi Raja was descended from the same person in the 7th degree. The family of Bhrigu, therefore, held part of the lands between Kasi and the hills, during the time that the greater part of that tract belonged to the Kasi Rajas. The inscriptions on the works, attributed by some to Parasurama, are unfortunately in a character no

longer legible; but I can scarcely believe that they are of such antiquity as seven centuries before the birth of Christ, which even on the shortest allowance would be about the time of that furious priest. Whoever erected them, would appear to have been a worshipper of the Budhas. It is alleged by the chief family in the neighbourhood, that it is descended of this god, and it traces its origin to a certain Mayura Bhatta descended of Parasurama, who, like his ancestor was a Brahman, and even a saint living in silent contemplation (Muni). His descendants giving themselves up to temporal affairs, are reckoned Kshatriyas or Rajputs, and they pretend to have been Rajas of the adjacent country for 98 generations or successions. I shall treat farther on this subject, when I come to speak of their estates and tribe.

The Kasi Rajas are said by the traditions of this district to have been expelled by a people called Gorkha, whom I take to have been the same with the Siviras, and were so called as being followers of Gorakhnath. At Kasi these have left very numerous marks of their power, and a few remain in the parts of this district that seem to have been subject to the princes of that city; but none can be traced in its western parts, which probably continued longer under the Cheros, who had destroyed the kingdom of the family of the sun in Ayodhya, as well as that of the moon in Magadha. The Gorkhas seem to have been soon expelled from this district by a people called Tharu, who are said to have descended from the hills, and extended themselves over every part north of the Ghaghra at least. Of this people very numerous monuments are shown, and from these they would appear to have been an industrious powerful race, as the number of great buildings of brick, which they have left is very considerable; nor do they seem to have been under the necessity of securing their private buildings or towns by fortifications. A few of these people still remain in this district, and many in the northern parts of Mithila, by which it is bounded on the east; and it must be observed, that Mithila also was a part of the patrimony of the family of the sun, and was held to the commencement of the iron age at least, that is on the most moderate computation until about 500 years before the birth of Christ, by a dynasty called Janaka descended of Vaiwaswata. The Tharus pretend to be in fact the proper

descendants of the sun, and their having expelled the Gorkhas from their usurped estates, and their having descended for this purpose from the hills, are not incompatible with that pretension. Their claims to rank however are treated with the utmost contempt, because they are an abomination to the Brahmans, and indulge in all the impurities of eating and drinking. This would to me prove very little, because I have little doubt, that the rules of purity in eating and drinking now in use, were established after the time of the old Kasi Rajas; and the monuments of the Tharus bear every mark of the most remote antiquity; while it is very possible that they might have for a time retired to the hills to escape the fury of the Cheros, and that they may have issued thence again when a favourable opportunity offered. Farther in most places of this district there are no traces of any people, who existed between the time of the family of the sun and the Tharus, while the monuments of the latter bear every mark of the most remote antiquity, and entirely resemble such as are attributed to the descendants of Vaiwaswata. So that it may be supposed, that they were not expelled, but only rendered tributary to the Cheros. I am however persuaded, that the claim of this tribe to be of the family of the sun is groundless; because they retain in their features strong marks of a Chinese or Tartar origin, although it must be confessed that these marks are somewhat softened, and that the faces of the men especially do not differ so much from those of Hindus, as those of a pure Chinese do. Still however, a difference is observable even in the men, and in the women and children is very clearly marked. I am inclined therefore to refer this irruption of the Tharus to the time when the Chinese Hiuentse, with the assistance of Yetsonglongtsan, king of Thibet, invaded India, that is about the middle of the 7th century of the Christian era, (Asiatic Researches, vol. 8, p. 112). The only prince of the Tharus, of whom tradition has preserved any knowledge, is Madana Sen, a perfect Hindu name, as is also that of his lady named Karnawati; so that if I am right in supposing him of a Chinese or mountain tribe, he must have adopted the language of his subjects. His chief priest, Rasu, is said to have been of the impure tribe called Musahar, and there can be no doubt, if the tradition which points out this priest's temple be correct, that he wor-

shipped the Budhas, as it is well known, the Chinese have done since the first century of the Christian era.

The Tharus seem from the nature of their works to have held the country undisturbed for a long time, when part of them were expelled by Rajputs, who had adopted the rules of purity; part by military Brahmans and part by an impure tribe named Bhar, which has been mentioned in the course of my reports. The military Brahmans who were chiefly of the Domkatar tribe, seem to have been at first the most successful in seizing on the territory of the Tharus. But after a time the Bhars in most places prevailed, and drove out the Domkatars.*

Afterwards the Bhars were totally, and the military Brahmans in a great measure were expelled by Rajputs of pure birth, many of whom have held their possessions very long, but in general dependent on other countries. In particular it would seem, that for some time previous to the Muhammedan conquest by far the greater part of Kosala was subject to Kanoj, and formed the province of that kingdom, which was called Sarwariya, and this is the only old name by which the vulgar now know the country. Although the kingdom of Kanoj was overturned, the dependent chiefs of this district, seem to have been very lately, and very imperfectly subdued by the Muhammedans; for it would appear, that in the 40th year of Akber, when Abulfazil composed his account of India, the whole land rent amounted to 268,169 rs., of which the share paid by the vast extent north from the Ghaghra seems to have been a perfect trifle. Towards the hills some of the impure tribes retained their possessions until long after the establishment of the Muhammedan power; for after the capture of Chetaur, about the beginning of the fourteenth century of the Christian era, when the Chauhan tribe, to whom that city belonged, fled for refuge to the northern mountains, it was found, that the country called Champaranya, including the north-east part of this district, and the north-west of Saran, belonged to an impure chief, as I have mentioned in the account of Puraniya. This chief is here usually confounded with Madana Sen the Tharu, because there are in Champaranya several monuments of that

* Dr. Buchanan supposes that the people of Puraniya called Bhawar are the same with the Bhars of this district.—[Ed.]

prince; but he must long have preceded the arrival of the Chauhans, as some of his strongholds are in the vicinity of the Ghaghra, which long before that time had been conquered by the pure tribes. The principality of Champaranya was seized by the Chauhans, but traditions differ very much, even among the chiefs of that tribe, who still hold the lands, concerning the manner in which the transfer of property was made.

The pure tribes, as I have said, for some time made a powerful resistance to the encroachments of the Muhammedan kings; but as the influence of the sacred order increased, and as their increasing numbers diminished the power of the state, by their obtaining the lands, which formerly had supported fencibles (Kshatris), the authority of the Moslems was enlarged; still, however, until the English took possession in the beginning of this century, each chief lived in a fortified den, surrounded by woods and thickets of thorny bamboos; nor did they ever pay a revenue, until it was extorted by force, while the country was daily growing worse and worse. Major Rutledge, who took possession, when the district was ceded by the Nawab Vazir, most judiciously commenced his administration by destroying these strongholds, and removing all hopes of resistance to the law. The southern parts of the district have in consequence improved considerably; but the northern have suffered much in consequence of an usurpation of large estates by the Raja of Gorkha, who governs Nepal, and all the mountains of the north. The efforts of the British Government to bring about an amicable arrangement by conciliatory measures, having been attributed by the people to fear, the doubts, which have arisen, have occasioned very great distress, and driven thousands from their habitations and property; and should even the measures of government succeed, which is very doubtful, much time will be required to restore confidence and population, while the losses of the sufferers can never be compensated.

It must be observed, notwithstanding the ferocity usually attributed to the Muhammedan conquerors of India, that scarcely any family of note among the native chiefs, who possessed the country before the conquest, had become extinct, or been deprived of its lands during the long period which

followed under Muhammedan control. But that, during the Hindu government, each change had been followed by the complete destruction or banishment of the family that was subdued. Although many of the chiefs pretend to be descended of the family of the sun, none of these allege, that their ancestors have retained uninterrupted possession; on the contrary they all admit, that their ancestors had retired to the west, from which they again returned, after an interval of many ages. The Cheros or other immediate successors of the family of the sun have entirely disappeared, as have the Siviras, by whom they were succeeded. A few Tharus still remain on the skirts of the hills, reduced to ignorance and poverty. The military Brahmans in most parts have become entirely extinct, except near Behar, where the support of their warlike brethren in that province has enabled one or two families to reserve a little property. The Bhars, who co-operated with the military Brahmans in destroying the Tharus, have suffered still more, and are reduced to a few miserable families, who live in the skirts of the forests by collecting the natural productions of these wilds. It is also to be observed, and I think to be much regretted, that the operations of our systems of finance and law have done more in twelve years to impoverish and degrade the native chiefs, who succeeded the impure tribes, than the whole course of the Muhammedan government.

CHAPTER III.

TOPOGRAPHY OF THE DIVISIONS OF THE COUNTRY.

Division under the Kotwali* of Gorukhpoor.—Except what has been cleared about the cantonments and the houses of Europeans, which may be about one-fifth of the division, and the town, which may occupy as much, the whole is overwhelmed with mango plantations, which in some places have begun to decay, and are intermixed with other trees that have sprung up spontaneously. The town therefore contains almost the whole population, and is nearly a mile each way, besides the cantonments, which are on its west side. It is situated on some high land upon the left bank of the Rapti, a fine navigable river, but only a corner of the town is adjacent to the bank, the extent of high ground being there small, and widening farther back from the river. The situation, however, is good and healthy, and would be more agreeable, were the forests and plantations cleared away, as they exclude ventilation, occasion many muskitoes, and harbour great numbers of monkies, which are exceedingly troublesome; but the natives would object strongly to any such measure; and it has been by an act of power, that the magistrates, since the English took possession, have cleared even the town, and the space necessary for the cantonments.

In 1805 an estimate was made, and the town was then supposed to contain 4568 houses. It has increased since, and by a list given by the chief man of each ward (Mahal), it is now supposed to contain 6121 houses, at the rate of about $7\frac{3}{4}$ persons for each, besides Europeans and soldiers and their followers. The buildings are very mean, and the streets in general are crooked, dirty, and filled with impediments; but they are not so narrow as in many Indian towns. The houses, with respect to the streets, are placed very irregularly. Ten, besides those of Europeans, are of brick with flat roofs, seven of two stories, and three of one story; 200 are

* Native officer of police.

partly of the above fashion, and partly have tiled roofs; one house in 32 may have brick walls, but the roofs are entirely tiled; one in eight consists of mud walls two stories high, and all these have tiled roofs, except about five, which are thatched. Ten out of 16 are mud walled huts covered with tiles; three out of 16 are mud walled huts thatched; and one out of 16 is a thatched hut with walls made of hurdles. Many of the mud walls are exceedingly rough; but some are neatly smoothed, and a few painted with grotesque daubings. When new, like others in this district, the tiled roofs are uncommonly neat; but they are very soon spoiled by the monkies, who from their insatiable curiosity, and restless mischief, turn over the tiles, and render the roofs the most unseemly and useless in the world.

There are two mosques of some size, but one is a complete ruin; and the other, although still frequented, is ruinous, and has never been any ornament to the place. It is indeed the heaviest piece of brick and mortar that I have ever seen. The Imam Vara, intended to commemorate the sons of Fatemah, and built by Suja Uddoulah, is handsome and large, and is kept in excellent repair by a person who has a large endowment. It would be very ornamental were it not surrounded by a chaos of filth and misery that adheres to its very walls. The fort called Basantapoor, on the banks of the Rapti, is usually said to have been built by Kazi Khulil-Rahum, who was governor of the district (Chuklahdar) about 150 years ago; but it is mentioned by Abul Fazil as existing in the time of Akber, and could only have been repaired in the time of that prince's great grandson. It continued ever afterwards to be the residence of the chief officer of the district; but when the English took possession (1802), the fortifications had become ruinous. Major Rutledge pulled down a part, and built some rooms in the European manner, but still it is a very sorry place, although it serves the collector as an office and treasury. Round the town the magistrates have made some good roads, and the houses of the Europeans are scattered on the east, south and west sides of the town, especially on the last, where the military cantonment and jail are situated. I have seen no station where the houses of the Europeans have so poor an appearance, or where the grounds about them are so destitute of ornament.

The name Gorukhpoor is no doubt derived from the personage named Gorakhnath in the vulgar language, and Gorakshanath in the Sangskrita, who is said to have resided some time at the place performing penance. The fables which his followers relate concerning this person are so extravagant, from their supposing that he is the only true God who has always existed, that nothing satisfactory can be derived from this source concerning the duration of the town of Gorukhpoor. It is supposed by his disciples that he resided here all the silver age, and that the Newars, who now occupy Nepal proper, were then in possession of the adjacent part of the country. No monument however of this people is shown in this district, nor among them did I ever hear that they had been addicted to the worship of this person, and I suspect that this is a fable invented since the family of Gorkha obtained possession of Nepal. It is very possible that the ancestors of this family may have received its tutelar deity from this place when the mountaineers or Tharus were in possession; for, although called Rajputs, there is little doubt of this family having been originally barbarians (Mlechhas) of the mountains. I should have supposed that this religion and the name of the place had been derived from the Gorkhas, who are supposed to have preceded the Tharus in the eastern parts of the district, and who were probably the same with the Siviras; but I see no traces of that people about the place, nor is there indeed any building or image in the division that can pretend to be a relic of antiquity, and the Mahanta, or priest of the temple of Gorakhnath, acknowledges that it had been long concealed, and was only disclosed to sinners about 400 years ago. The town before the time of Akber had become of note, as it was then the chief place of a district (Serkar).

One of the Mahomedan mosques, which has now become entirely ruinous, is near the fort, and has been partly built of stone, rather neatly carved. From an inscription on the gate it would appear to have been built in the year of the Hijri 922, which is probably about the time that the fort was first erected. The mosque now frequented is called the house of God (Khodai Musjed), and, as I have said, is a most clumsy building, and rather ruinous, although it was erected only 150 years ago by the person who repaired the

fort, and has been since repaired. The office of Khadem was first held by a saint named Shah Maruf, whose descendants in the 11th generation now hold the office, and are the chief Pirzadahs in the place, having multiplied to five houses; and being well endowed. This mosque had also attached to it a priest (Khutib) and crier (Nuzim), whose offices were hereditary, and endowed by grants of land from the kings. The last of the criers having died without heirs, the office has been discontinued. The priest performs Nemaz on Fridays, and on the Id and Bukurid. From 5 to 10 people perform Nemaz here daily, and a few more on Fridays. At the Id and Bukurid from 500 to 700. Both Hindus and Moslems make offerings when they marry, or when in distress. The keeper of the Imamvara, Shah Roushunali, has large endowments. He is a native Persian, now very old, and exceedingly reserved towards infidels. He seldom resides in the Imamvara, but usually supports there from 15 to 20 Fukirs, all unmarried, as he himself is. During the 10 days of the Mohurrum these distribute daily from 25 to 30 *mans* (each $118\frac{2}{10}$ lb.) of boiled rice and pulse (Khichri) seasoned with butter, salt and spices, and from 4 to 5 *mans* of sugar and molasses in sherbet.

A saint and martyr named Sellar Musyud Gazi resided here some time, but is buried at Baharaich in the dominions of the Nawab Vazir. For a long time, however, 50,000 people have annually assembled on a field near the Rapti, to celebrate his memory. Lately two monuments (Rouzahs) have been erected at the place, one by a shoemaker (Muchi), the other by a huckster (Daphali), and both begin to have some profit. The assembly is on the first Sunday of Jeth; and is what the Muhammedans of Bengal call the marriage of Gazimiya, and no festival except the Mohurrum is more generally in use on the banks of the Ganges, owing probably to the saints having been the father of Firoz, king of Delhi.

A monument has been built here in commemoration of Shah Budiuddin Mudar, who founded an order of religious mendicants, and was in high repute as a fanatic about the time when Timur invaded India (A. D. 1398). This saint is buried at Mukunpoor near Kanpoor, but at the monument here from 2 to 3000 people assemble on the day of the saint. There are besides about 200 small brick Musjeds, which

name is given to every place consecrated to religion, such as places of prayer, tombs of holy men, &c. At three or four of them one or two people pray daily. Few of them have keepers (Khadems), and none of them any other kind of priest.

The chief place of worship among the Hindus is the (Chaura or Sthan) seat or place of Gorakhnath. The buildings are not large, but are neatly kept, and have every appearance of being quite modern. The Yogis, who are the owners, do not deny this; but point to the place where the god sat during the silver age, as the object of worship. There is no image. The chief priest is called a Mahanta, and he keeps with him about 20 Yogis. He has three entire Mauzas, and three detached portions free of assessment, and from 200 to 250 people go every Tuesday to make offerings; some of them are Muhammedans. There are besides two fairs (Mela). On the Sivaratri 10,000, and on the Dasahara of spring 4000 assemble. The temple is situated a little way north from the town, and near it is a pond dug by persons unknown, or rather it is pretended, miraculously formed. It is called Mansarawar, and many who repair to the seat of Gorakhnath, bathe in it as they return. Some neat new buildings are erecting near it for a convent of Ramanandis, who seem to be thriving. An attempt has been made at this place to introduce to notice a Sivalingga, placed there by the Emperor Vikrama; but the plan seems to have failed.

A certain scribe named Madhavdas, who once had the management of the revenue, has lately dug a tank, which he calls Suryakund. In order to sanctify his work, he incurred a considerable expense in collecting water from the most celebrated Tirthas. This, it is supposed, has answered the purpose, and about 2000 people, mostly women, bathe in the pool on the 6th of the increasing moon in the month Bhadra. There are about 10 Linggas, but all have not temples, nor is any of them noted. There is a place dedicated to Hathi devi, and the property of two women, one of the sacred order, the other a maker of garlands. The former keeps the image in her house; but every Monday brings it to the place of worship. In the month Bhadra she receives the offerings, on every occasion, of from 200 to 400 votaries; but in other months from 10 to 20 only attend. A Bengalese Brahman

has lately built a temple of Kali for the use of his countrymen, who seem to think that this deity presides over Englishmen, and that by worshipping her the important favour of these conquerors may be secured. No ghosts are worshipped here, the citizens indeed scoff at even the Brahmadevatas, the most formidable of these spirits.

MUNSURGUNJ.—This jurisdiction contains above 800 square miles, and may be divided into three portions, that differ much in appearance. On the bank of the Rapti is a tract, which in the rainy season is inundated, and part of it so low as to retain a good deal of water even in the heats of spring. This forms the Ramgartal near Gorukhpoor, which at the commencement of the fair weather, when the floods have just retired, may be six miles long and three broad. The water even then is not deep, and it is overgrown with weeds, and in the shallower parts with aquatic trees. As the season advances the water diminishes, and the vegetation increases, and in spring the former is very dirty. It abounds in water birds; but the fish are not good. In the dry season the low lands near the Rapti look rather dismal, having few trees, and too much being covered with long withered grass or reeds; but they are very fertile, although not above a fourth part of them is occupied. East from this low tract is a great forest, occupying almost a third of this central mass of the district. East from the forest the country is very beautiful, consisting of fine plains intermixed with numerous plantations. The plains in many parts are kept clear and neat by the custom of fallowing, it being usual to cultivate each field three years, and then to allow it a fallow of almost an equal length. There is however too little variety in the plantations, the mango being every where too predominant, although there are a few bamboos and palms.

In the whole of this extensive division no habitation has walls of a better material than clay, and only ten have two stories. These are covered with tiles, as are 50 huts; all the others are thatched, and some of them with stubble; $\frac{14}{16}$ of the huts have mud walls, and $\frac{2}{16}$ have walls made of hurdles, the place where the people cook being plastered with clay. As the thatched roofs in this district are more rude than any that I have yet seen, architecture is no ornament to the country.

Kaptangunj (Captain's Town) and Pipraich are the only places that can be called towns. The former contains about 250 houses, or rather huts; hut some of them are tiled, and for its size it carries on a good deal of trade. Pipraich is somewhat better built; but it is said contains only about 100 houses, although, so far as I can judge by passing through, I should think, that it contains at least twice that number. The division is so extensive, that the people at the office of police knew very little of the remote parts, and it is possible that several places of worship and antiquity may have escaped my notice.

The chief place of worship among the Muhammedans is at Itaya, 4 coss north and east from Gorukhpoor, in the forest. It is a small monument dedicated to a saint named Abdul Kader Huzrut Gous Lazem Dustgir. He was buried at Bagdad, but he fasted 40 days and nights in the forest here, and the keeper says, that he is the saint's descendant. As such a fast is considered by the people here as rather an ordinary exertion of holy men, the keeper, in order to enhance the merit of his monument, has brought a brick and lamp from Kichhauchha in the dominions of the Nawab Vazir. He has 100 bigahs free from assessment, and from 1000 to 1500 people assemble on the day of the long-named saint. The Hindus have no place of worship at all remarkable, or that attracts an assembly. There are six small temples of Siva, and 50 images of the great god are placed under trees. There are six or seven places (sthans), where his spouse is worshipped under the name of Devi, but two only have images, nor is there any temple. Every old established village has two open places (sthans) of worship. One is dedicated to the Dihuyar, or village deity, whose priest is of the dregs of impurity. In many places this deity is anonymous. In others he is some ghost of low degree, such as Bhiu Raut, Baghaha, Samardhir, or Kasidas. The other is dedicated to some ghost of the sacred order, and his priest is the Brahman of the village (Ganguya Brahman).

The chief monument of antiquity is a little way above Gorukhpoor, at the junction of the Rohini with the Rapti. It consists of a large elevated space, the greatest length of which is from east to west. The greater part rises pretty high, and consists of bricks mixed with soil. The surface

of this is rather uneven; but it looks as if it had consisted of two large buildings separated by a ditch. The traces of fortifications, round the portion next the river, are not distinct nor certain; but the eastern building has evidently been surrounded by a ditch close to its walls. To the east of this, beyond a small water course, are many small detached heaps, which have probably been houses for the accommodation of the Raja's attendants. On the whole, the place seems to have been a large brick castle with the central part strengthened by a ditch, and it has the appearance of very considerable antiquity. It is called the Domingar or the castle of the Domlady. The Doms are a tribe in the lowest scale of impurity, and some imagine, that these people and the Bhars, little better, expelled the Tharus; but better informed persons, I think, say, that the owners of this fortress, and vicinity after the Tharus, were the Domkatar Brahmans or Bhungihars, who have been particularly described in the account of Behar. They were here dispossessed by the Sirnet Rajputs. The Domkatars are now extinct in this part of the country, but the tradition here is, that they were impure livers, so that the rules of impurity in living, now observed, seem to have been introduced by the Sirnet, who have held the country between 40 and 50 generations. On the western part of Domingar are the monuments of two Muhammedan holy men: both are brick buildings, and that lowest down is pretty large. Both are quite ruinous, but a few occasionally attend them.

In this division may be traced twenty or thirty old mud forts, which were built in order to keep off the incursions of a mercantile vagrant tribe called Bangjara. These Bangjaras were in the habit of coming in great hordes, with men, women, children, and cattle, under the pretence of trading; but, wherever they found the country defenceless, they plundered, and were not repressed until a few years before the English government, when they were severely chastised by Raja Sarbajit of Bangsi. At Rajdhani or the royal city, south and east from Gorukhpoor about seven coss, are said to be the ruins of a fort built by a Kasi Raja, although others attribute it to a Sakarwar Rajput, who held the country, before the arrival of the Sirnet. It is in a part of the division, that is detached in Gajpoor, and about four coss

from that place. It is called Sahankat, and is said to be a rampart of brick about a coss round, and very like the old fort at Rudrapoor, and like that overwhelmed by forests; nor do I see any reason to doubt, that it was built by the same person who built the Sahankat near Rudrapoor, which every one attributes to a Kasi Raja. And it must be observed, that the Sirnets deny altogether the story of the Sakarwars, and claim to themselves the honour of having expelled the impure tribes.

Parraona.—This also is a very large division. A little land near the Gandaki is yearly inundated, but in general this is an elevated level territory, with however some high narrow banks, that wind for a considerable way in various directions, and considerably add to the beauty of the prospect. A long narrow forest, containing many mimosas and other prickly trees, and rather stunted, winds obliquely through the middle of the division in its southern part, and towards the north runs along the frontier, but is not ornamental. The remainder of the country is clear, with very numerous plantations, among which the fields wind in beautiful lawns, especially near Parraona, where the proportion occupied by plantations is enormous. The custom of fallowing is adopted here also, and renders the appearance of the country more beautiful by keeping down rank vegetation.

There are no large lakes; but the south side of the division is very easily watered, the springs being very near the surface. The owners of land have three houses of brick. That of the Parraona family, the only one that I saw, is a small castle at a corner of the town, and is very ruinous, though still inhabited. There are 75 mud walled houses of two stories, of which five are covered with tiles, and 70 are thatched. Of the huts $\frac{6}{16}$ have mud walls, and of these 10 are covered with tiles, and 200 have wooden doors and window shutters. The remainder are thatched, and, if they have any door, it is a mat to shut the only aperture in the hut, except the crevices in the roof; $\frac{10}{16}$ differ from those last mentioned in having their walls made of hurdles, the place for cooking being plastered with clay on the inside.

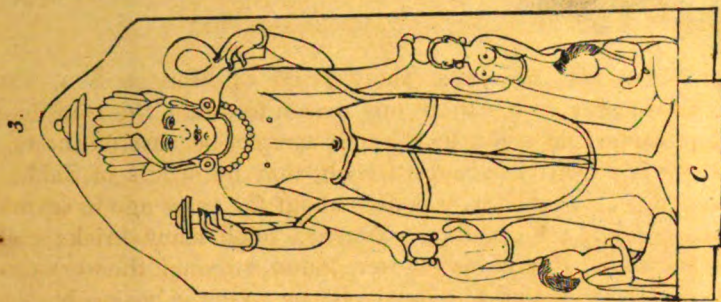
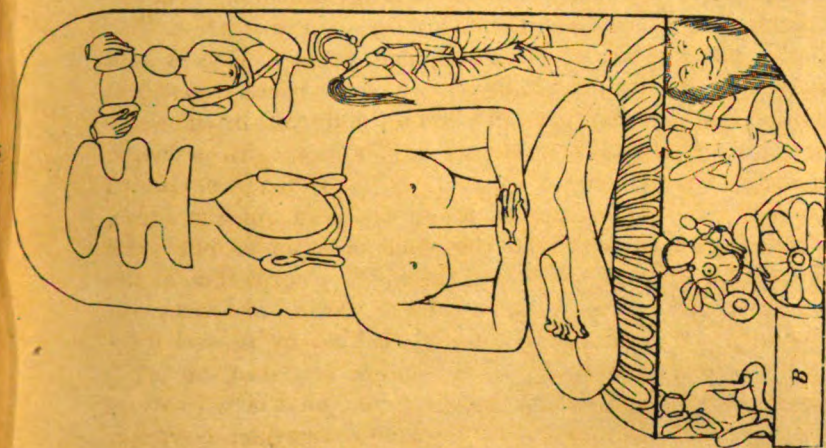
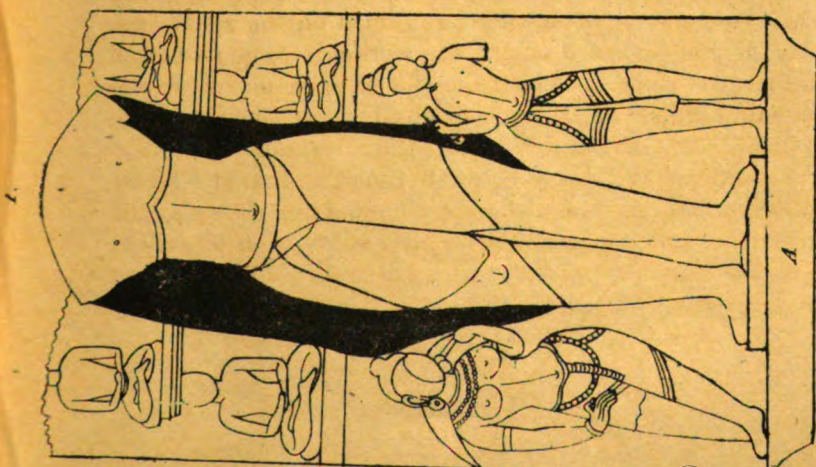
Parraona, when I saw it, contained about 700 houses. A few had two stories, and a few were tiled, but by far the greater part consisted of miserable thatched huts. The

Raja's castle occupied one corner, and the whole had been surrounded by a ditch and bamboo hedge. Last year it had suffered much from fire, on which occasion about 200 families retired to the Saran district; and, on the day after I left it, another very destructive fire took place, which will probably occasion a similar desertion, although Saran is overstocked with people; but those near Parraona are dissatisfied with the present management of their country. The town had considerable manufactures of sugar, nitre, and cloth, and advances were made from the Company's factory at Gazipoor for the two latter; but those for cloth have for two years been discontinued. Simra contains about 100 houses; no other place deserves the name of a town.

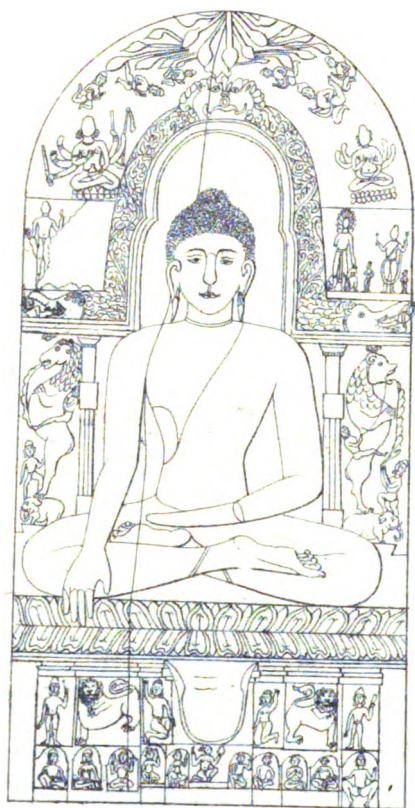
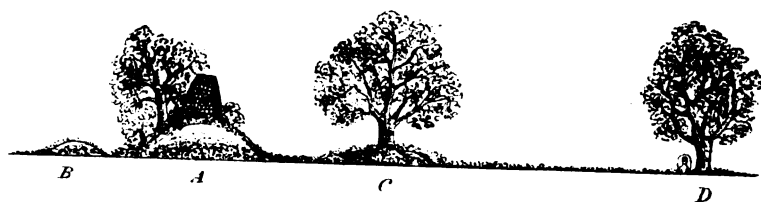
The Moslems have no place of worship at all remarkable; a monument of brick dedicated to Shah Burhan, about four miles east from Parraona, attracts a few votaries every Thursday night. The chief religious assembly of the Hindus is at Bangsi-ghat on the great Gandaki, where 50,000 bathe on the full moon of the month Kartik. At Kaharaliya, south and east from Parraona about 3 coss, there was about 15 years ago an image of the great god placed under a tree, and called Kubernath. No one knew how it came there, and it attracted little notice, until an Atithi covered it by a small temple of brick, and propagated an account of its power. Five thousand votaries now attend at the Sivaratri, and from 500 to 700 in the month Vaisakh. At Pureni south and west about 6 coss from Parraona, there is a place (sthan) dedicated to the worship of the goddess (Bhawani), where 4,000 people assemble on the Dasahara of spring. There are other 10 places dedicated to the worship of the goddess, and 50 Linggas, of which 10 have small temples of brick. Every old mauza has a place dedicated to the worship of some ghost of the sacred order, with a kindred priest annexed. Those of whom I heard are Harirama Misra, and Govinda Vama Misra. Very few devils of lower rank presume to intermeddle with village affairs. About half-a-mile south from Parraona at Chhauni, which during the Nawab Vazir's government was a military station, there is a very considerable heap of bricks now covered by soil and trees, and of a conical form. It extends about 224 feet from east to west, and 128 from north to south. It is said, to have been the temple where Rasu,

the Musahar, who was family priest of Madana Sen, was wont to pray, nor is there any reason to doubt the tradition. I presume that it has been a solid temple, because on the top there is no cavity except a trench, that by orders of Sakhautullah, a Tahasildar, was dug about 20 years ago in search of materials for building. When a good many bricks had been taken, several images were found, although the workmen had not penetrated into any chamber. On the images having been found, the work was abandoned as impious. Some of the images were buried again, one remains near the trench, and some have been removed by the Hindus to a small terrace at a little distance from the ruin, where one of them has become an object of worship. The image remaining near the trench (plate 1. A.) represents a male with two arms. He has a male and female attendant, and on each side is supported by two Buddhas. The one which has become an object of worship, and has been placed on the terrace by the name of Hathi Bhawani, is evidently a Buddha, with a triple umbrella over his head (plate 1. B.) When the Hindus erected this male image as a representation of a goddess, which might have excited the smile of a philosopher, the wrath of a Fukir, belonging to the military corps then at the place was kindled, so that he drew his sword and smote off the face. This image is supported behind by several fragments, and a small image of a Buddha seated in the usual posture. By its side has been erected an image (plate 1. C.) resembling those called Vasudev, Lakshmi Narayan, Gadadhar, &c. in Behar.* I requested the Thanahdar to employ people to dig a well from the centre of the top, and to sink it from thence to the level of the adjacent plain. This could not be done while I remained on the spot; and, after digging about 5 cubits, the workmen came to a small pavement of stone, on which they found some bones, whereupon they desisted. These bones probably belonged to some Muhammedan, who had been buried on the ruin.

About five miles east and south from this ruin at Kateya, it is said, Madana Sen had a fort. What are shown as the remains, consist of a small square place surrounded by a slight ditch, and earthen rampart, which has probably been planted

* See Vol. I. Plate IV. No. 3. Plate VII. No. 1.

Images from the Ruins at Kaley a Old Temple near Parrauna.

London. 1838. W. H. Allen & Co. 7 Leadenhall Street

J. Netherclift Lithog

Malakumar – at Burampur near Kesiya.

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J. Netherclift Lithog.

with a bamboo hedge. Within are a few scattered bricks, nor has the place any resemblance to the great works of the impure tribes, but entirely resembles the modern simplicity of the dens, in which the Rajas of pure birth skulked. There are besides about 20 such old forts, which were useful not only to secure the Rajas from the petty vexations of revenue officers, but from the attacks of the mercantile robbers named Bangjaras, who, during the governments of Suja-uddoulah and of his eldest son, were very troublesome.

KESIYA.—Is a long narrow jurisdiction of small extent. This division in its appearance entirely resembles the southern parts of Parraona; except, that the woods are confined to the eastern boundary, and that the extent of plantations is much smaller in proportion. It contains no marshes or lakes of considerable size. There is no house of two stories, nor is any built of bricks; $\frac{8}{16}$ of the huts have mud walls, and 15 of them are covered with tiles. The remainder is thatched with grass, and very few have wooden doors: some are thatched, and have walls made of hurdles, which near the fire-place are plastered on the inside with clay.

Kesiya, where the office of police is situated contains about 100 huts, of which a few are roofed with tiles. No other place deserves the name of a town. About a mile west, a little southerly from Kesiya is a conical mound of bricks, which in the neighbourhood is called Devisthan, or the place of the goddess; because under a tree growing on the mound is a place, where as usual in this district, the natives attempt to gain the favour of the deity by offering rude images of elephants made of potters' ware. This mound, except in being covered by trees, and in wanting a modern building on its summit, has a strong resemblance to that at Nij Kasi near Benares, and in the same manner as at the ancient temple of the Buddhas; there ishere also, at about 400 yards west from the mound, the ruin (plate 2, A,) of a solid temple, of a circular form, built indeed entirely of brick, and much smaller and farther advanced in ruin than that at Kasi; but in other respects very similar, and especially resembling it in being near the east end of a considerable space covered with heaps of broken bricks (plate 2. B C.) The people have no tradition concerning the time when this building was erected;

but say, that the Dewhara was the abode of Matakumar, a person of the military order, and that, when he was flying from his enemies, he was converted into stone. What is shown as this miraculous stone, is a large image of a Buddha carved on a block of stone lying under a tree, east from the ruin (plate 2. D). This was probably the chief image in the temple, and it has been thrown, where it now is, by its enemies; which is probably the only foundation for the story of Matakumar. When the image was discovered, a Raja of Parraona gave a Brahman some land, to induce him to act as a priest, when the people in the vicinity make offerings, which are besides worth two paysas each to this servant of the heterodox Buddhas. He is too ignorant to know any thing of their heterodoxy, nor, indeed, had he ever heard of their name. The image, of which a drawing accompanies the view of the ruin, has under its feet a scroll, on which has been an inscription now very much defaced, so that only the first line is legible. It is said to be 180 Rama Rupa Ramu Ray. The figures probably refer to the year of some era, but of which it is impossible to decide. The people think, that from the words we are to infer, that the image was made by a certain Ramu Ray, the son of Rama Rupa. It would be difficult to decide, whether we should attribute this monument to the Kasi Rajas, to the family of Parasu Rama, or to the ancestors of Madana Sen, all of whom are said to have lived in the vicinity. As, however, I can find no such personage as Ramu Ray, the son of Rama Rupa, in the genealogies of the Kasi Rajas, and of the descendants of Parasu Vama, it is probable that the founder was rather a Tharu.

Belawa.—This is a jurisdiction still smaller than Kesiya. It is better cultivated than most parts of the district, and the plantations are more moderate than usual; but still more numerous than is required for profit, and abundantly so for ornament. The country is rather uneven, in some places rising into swells, and in others very low, and copiously supplied with water, so that it is naturally rich and beautiful; but the custom of fallowing does not prevail here, and most of the waste land being covered with long withered grass, looks dismal.

No house is built of brick, nor contains two stories, and

only five of the huts are tiled. The other roofs are thatched. Three-fourths of the huts have mud walls; those of the remainder are made of hurdles. Belawa is a poor small place, nor in the whole division is there any thing that can be called a town.

In the Mauza of Mandarapali, on the bank of the Dohar, about three miles from Belawa, is an old temple, now very ruinous. It has been a quadrangular terrace, the sides of which were supported by a brick wall, three or four feet high. On the area have been built four small pyramidical temples, without porches, and the upper parts of the whole have fallen. The chamber of that farthest south has been entirely filled by rubbish; but on this have been placed the fragments of the image so common in Behar, which represents an enraged female, assisted by a lion in destroying a man, who springs from the neck of a buffalo. Whether or not this was the image worshipped in the temple, it is impossible to say. The walls of the chambers in the other three temples are entire. In the largest are two images, but both detached from the walls, nor is there any thing to show, whether they were originally placed in the temple as objects of worship, or whether they have been found among the ruins, and were at first intended merely as ornaments. The latter is, however, probable, as a half of another, exactly like the largest, is lying on the outside of the door. Both those in the inside are evidently intended to represent the same personage. The largest is called Rama chora,* the son of Rama, and from thence it may with some probability be supposed to represent Ramu Ray, the son of Rama rupa, who erected the image of Buddha, near Kesiya. The image resembles those called Vasudev, in Behar, but on the list round the stone, from which it has been carved, are the ten incarnations of Vishnu, with several other figures. The smaller image is exactly of the same form with the larger, but wants the figures on the list. In another chamber of the temple is a loose stone, containing the usual figure of Hara, with Gauri seated on his knee, and attended by the bull and lion, that is so common in Behar. The same figures, but much defaced, are represented on a stone lying in a small temple. Under a large tree at the N.W. corner of the terrace just now described, is a Lingga,

* See Plate iii.

and N.E. from thence is a smaller square terrace, on which has been a small pyramidical temple, like the four on the greater terrace. It now contains a Lingga. These two Linggas are now the objects of worship; although, when the temples were entire, they could, from their situation, have been only objects of a secondary consideration. A Brahman is attached as a priest, and about 250 votaries assemble at the Swaratri. Many people do not like to worship the ghosts of either the sacred order (Brahma devatas), or those of the impure tribes, or the low deities of mauzas; but several villages are provided with places and priests for those kinds of worship. The place that attracts most sacrifices is that of the goddess (Devi), who protects an old fortress called Bawan Maricha, that is, the 52 bastions, or Hetampoor. This fortress has been a square, surrounded by a brick wall, very high and thick, as its ruins now form a very considerable mound, for no part is standing. There are no traces of a ditch, nor of any considerable buildings that might have been within, so that this square area would seem to have been a mere military station. At the east end, however, where the only gate has been, are the remains of many works that may have been the Raja's house, and these are, I presume, what are called the 52 bastions; for I see nothing on the other sides that could be called such. Among the ruins of these works, is the place dedicated to the tutelary goddess (Devi) of the fort, by a certain Rasu, who was chief priest, or enchanter, of a certain Tharu prince, to whom the fort belonged. The people here have no knowledge of the Raja's name; but in other places it is stated, that Rasu was priest of Madana Sen, last prince of the Tharus. All those in distress have ever since applied for assistance, by sacrifices, and offerings of elephants made of potters' ware; but the priests for five generations, have been Brahmans. The present occupant alleges, that a surgeon at Gorukhpoor having committed sacrilege, carrying away from the ruin some bricks to build a house, incurred the wrath of the goddess, who burned his house, and killed his lady; but, I believe, that there is no sort of foundation for any such accidents having happened.

There are other twenty small ruins attributed to the Tharus, from whom the Visens, descended of Parasurama, recovered the country, but lost it again to the Pamar tribe, which

Rama _ Chora near Belawa.

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had several small forts, when Major Rutledge took possession. One still remains at Belawa, and consists of a ditch, and earthen rampart, with a strong hedge of thorny bamboos on the counterscarp.

SELEMPOOR MAJHOLI,—Is a very long and narrow jurisdiction, which winds round the north and west sides of Bhagulpoor. It is a very beatiful country, with numerous plantations. The lawns between are open, and in the greater part waste, and covered with short grass. The cultivation is chiefly confined to a corner projecting east from Selempoor, into the district of Saran, by which it is surrounded on three sides. There is a brick house at Majholi belonging to the Raja, but it has become ruinous, the family usually residing on its estates in Saran. Thirty houses, with mud walls, have two stories. Of these ten are covered with tiles, and twenty with thatch. All the huts have mud walls, and 250 of them are tiled; the others are thatched.

Selempoor is a corruption from Islampoor, so called from a Raja who was converted to the faith, and took the name of Islam Khan. The original name of the place was Nagar. It contains about 80 houses only; but Majholi, on the opposite side of the Gandaki, contains 200, and the two places are usually considered as forming one town, the one being the Muhammedan, and the other the Hindu part.

Bhingari, Kaparwar, Pipra, and Baghel, contain each about 100 houses. The chief place of Hindu worship is at Sohanag, where there is a temple of Parasurama, whose ancestors lived in this vicinity, and whose descendants are still supposed to be its owners. The priest is a Bhat, and about 1000 votaries assemble on the 3d of the moon, in Vaisakh. I could not conveniently visit this temple, which I regret much, as from the plan drawn by the people whom I sent on purpose, it would appear that there has been here a work of some size, and probably of considerable antiquity. From the account given by Vishnu Prasad, who drew the accompanying plan and figures (Plate 4, A and B.), it appears that there is a very considerable old tank, which, however, contains much water, covered with Nelumbium, but by no means approaching to a state of obliteration. Towards its S.W. end are traces of a brick Ghat, or stair, quite destroyed. Immediately west from this, and near it, is a quadrangular heap of bricks, which

the painter thinks may be 24 feet high, without any cavity on the top, or remains of walls. Still further west from this is the foundation of a large quadrangular building consisting of broken bricks, without any wall remaining. It is 4 or 5 feet high, and is 300 feet from east to west, by 200 feet wide, but the west end is rather irregular. Adjoining to the east end of the south side of this platform are the remains of another 200 feet square, and of the same elevation with the greater, only that a band 3 or 4 feet higher than the general surface, crosses it towards the south end. Between the east end of the great platform, and the high mound near the tank, is a small heap of broken bricks on which is placed an image exactly resembling that called Parasurama. West 200 feet from the the north-west corner of the great platform is a larger heap of bricks 7 or 8 feet high. There are two others west from the south-west corner of the smaller platform, and a fourth on the side of the tank north from the old stair. Adjacent to the west end of the great platform is a small modern one of very little elevation, and on its sides are two small modern temples: that on the west side contains a Lingga; that on the south contains four images, three of them of exactly the same form (Plate IV. A.), but called Parasu Rama, Vishnu, and Bhawani (goddess). This differs very little from the image called Jagannath at Hangsatirtha (Plate IV. C.), and no attention need be paid to any of the names given by the present worshippers, as one of these male figures is called the goddess, a mistake very common in Behar also, where the same figure is often called Lakshmi Narayan. The fourth figure (Plate IV. B.) is called Kuber, but it has no resemblance whatever to the figures usually so called. Like the others it is accompanied by the lion rampant of Gautama; but has also the goose of Brahma, which is the emblem of the Buddhists of Ava. The tradition, which the priest has, is, that a chief of the Visens, twenty generations ago, was afflicted with the leprosy, when, coming this way, he sent his servant for some water. The servant brought some from a small pool, and immediately on drinking, the Raja was restored to health. On examining the place, from which the water came, the images were discovered, and then the tank, and the buildings now in ruin were formed. The present temple of Parasu-

Jagannath – at Hangsatirtha.

Rama and Siva are avowedly quite modern. This tradition does not agree well with what Vishnu Prasad describes. The ruin, he says, bears a strong resemblance to those of the Cheros in Behar, being in a similar state of decay, and therefore must be much more ancient than the time of the Visen chief twenty generations ago. The style of the building and the images, it must be observed, have a striking resemblance, although larger, to those at Mandarapali in Belawa, and may likewise have been the work of Ramu Ray, the son of Rama. When the images, which probably belonged to the sect of Buddha, became heterodox, they were thrown out, and afterwards discovered by the Visen chief, who named them after his deified ancestor, and other orthodox gods, and placed them on the ruin; for one of them still remains in that situation, on the small heap. The others have been lately removed to a place constructed on purpose.

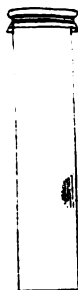
At Kechuyar is an image of the goddess Kulakula, to which many offerings are made at the Dasahara of spring. Sacrifices are offered, at all seasons, by those in danger. Many villages have their ghosts of the sacred order, usually called Brittiyas, as a title, and still more have a place dedicated to Yokhar, whose priests are Brahmans, but he is here reckoned a Gramya Devata or village deity, as are also Chauwa, Goriya, Samardhir, Sokha, Sambhunath, Kasidas, Phulmati, Mahavira, and Amana Sati. This division contains no remain of antiquity worth notice, unless the temple of Parasu Rama, and perhaps at Khukhonda, three coss north from Selempoor, where there is a temple of Parswanath belonging to the Srawaks, although none of that sect, so far as I could learn, reside in the vicinity.

Chauki Bhagulpoor.—Is a small narrow jurisdiction, at the south-west corner of which is a considerable island in the Ghaghra, the property of which is disputed between those of this district and the people of Joyanpoor. The division is fully cultivated, better planted than Selempoor, and very beautiful. Forty houses have two stories with mud walls. Of these 10 are covered with tiles, and 30 with thatch. Fifty mud walled huts are covered with tiles; all the remainder has mud walls and thatched roofs. Bhagulpoor,*

* This is not in the district of Bhagulpoor, as the English reader might suppose.—[Ed.]

where the officers of police reside, is a small town containing about 125 huts; but it appears neater, cleaner, and more thriving than most native towns of its size. One of the streets is wide, and has a row of sheds for the hucksters on market days. Many of the huts are very neatly roofed with tiles. Lar is a town, which contains 1000 houses, Payna has 500, Rajpoor 150, and Peri 100. These are market towns. Among places, where there is no market, Kangrauli contains 300, Gaura 250, and Barhej and Ramnagar each 200 houses. Five villages besides have from 100 to 150.

Bhagulpoor is said to be a corruption from Bhargawapoor, and it is said to have been the residence of the family of Brahmans, which gave birth to Parasu Rama, the incarnation of Vishnu; and the owners of this division, of Selempoor, and of some adjoining estates in Saran, claim a descent from that personage. There are near the place several ruins probably of great antiquity, but nothing like the remains of what could be supposed to have been the residence of so mighty a conqueror, but it is probable, from the nature of the legends concerning him, that he was constantly in camp, and employed his power to overturn every civil authority, and to enrich the priesthood, which will readily account for the distinguished eminence to which a new man raised himself. Still, however, his immediate predecessors and his descendants were persons of consequence. Immediately opposite to Bhagulpoor, on the other side of the Dewha, and in the district of Gazipoor, is a very old ruin called Khayragar, and evidently a fortress, which may contain 30 acres, although part has suffered from the river. I should without difficulty have supposed, that this was the family residence, and that it had been originally connected with some brick work under Bhagulpoor, in which case it must have been very large, the greater part having been swept away, when the Sarayu took its present course. Of this circumstance the people here have some tradition, as they say that Khayragar was once on the Bhagulpoor side of the Sarayu. They however insist, that this place was built by Bhagadatta, king of Kamrup, when he came to the assistance of Duryodhan at the commencement of the iron age. This is very possible; nor do I wish, without evident necessity, to go against the authority of tradition.

1.

Temple at Bhugalpur.

According to Lakishmem, the first line is in Sanskriter, & he thinks belongs to some Naslik or heretical sect. The four other lines in the same character are not Sanskriter nor Hindu, and he thinks that they must be in the vulgar language of the time.

2.

Temple

Pillar.

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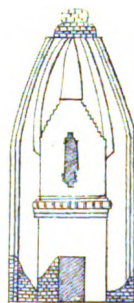
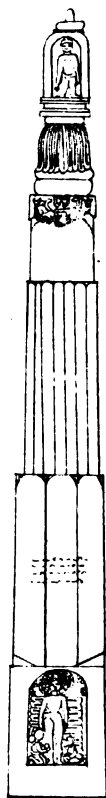
J. Nethercift Lithog

I have already mentioned that in Selempoor there is a temple dedicated to Parasu Rama, and several of the small relics of antiquity near Bhagulpoor are attributed to this personage. Immediately below Bhagulpoor the Dewha has laid bare some masses of brick rubbish, and this may possibly be part of the family abode, the remainder of which has been swept away by the river, but the quantity of bricks is trifling, and they are usually considered by the natives as having belonged to a mud fort built above by Sudrishta Narayan, a Kumar or younger brother of the Bhojpoor family, who made some conquests in this part of the country. Some indeed allege, that the fort originally belonged to the Visens descended of Parasu Rama, and was seized by the Pamars of Bhojpoor, and this I think probable, and that the Visen chiefs continued to live at the ancient family seat until the incursion of the Pamars, when they retired to Majholi. Near this fort, in a garden, is a stone pillar, which is a mere cylinder with a small flat cap, and totally destitute of elegance (*Plate* 5, No. 1.) There are no traces of buildings round it, and a considerable portion is probably sunk in the ground. It has contained a long inscription in an ancient character, which the Pandits cannot entirely read, many of the letters being of obsolete forms. The inscription is besides very much defaced, partly by the action of time, and partly by some bigot having attempted to cut through the pillar just in the middle of the inscription. A part however is tolerably distinct, and has been copied in the drawing. The zeal of this bigot was cooled before he cut half through the pillar, and, if he wrought with a sword, as is usually alleged, he must have had considerable patience to cut so far. It is however commonly believed that he desisted from terror, blood having sprung from the stone when he made a gash in it with one blow of the sword. Some say that this zealous person was a Muhammedan, others give the honour to a Yogi. This latter opinion has probably arisen from some persons having carved above the inscription, in modern characters, the words Raj Yog 1007; but this, I am told, has no connection with a person of the order of Yogis, but implies accession to the government 1007. Neither the name of the person succeeding nor the era is mentioned, and the character being very different from the other part of the inscription,

had even these circumstances been known, they would have thrown no light on the antiquity of the pillar. Many persons call it the staff (lath) or club (gada) of Parasurama; but others say that it belonged to Bhim, the supposed son of Pandu, and others allege that it was erected by Bhagadatta, of whom I made frequent mention in the account of Ronggopoor.

At Sahiya, east from Bhagulpoor about three miles, is a temple said to have been built about seven generations ago by Raja Pratap Mal, then chief of the Visens; but it stands on a heap of bricks, the situation probably of some former temple, from whence it is likely the images were taken. It is a flat-roofed quadrangular building, with one door in each side, and an open gallery supported by three arches before that to the east. It contains eight small vaulted apartments, the four central of which it is said had each an image; but only one remains in the chamber towards the north. The priest (Panda), who is a Brahman, knows this image by no name except Thakur, that is the god, but at Bhagulpoor it was called to the Pandit the goddess Chaturbhuji Narayani, while to my chief assistant it was called the god Chaturbuja Vishnu. In fact it represents a male, and is very similar to the image called Ramachhora lately mentioned, only that under the left foot of the principal image there is the figure of a Buddha, and that the principal image is entirely detached from the block, on which it has been carved, except at the feet. A figure with similar emblems, it must be observed, is found in the ancient subterraneous temple at Prayag opposite to Pratisthan, the first capital of the descendants of the most ancient Buddha.

About six miles north and west from Bhagulpoor, near a village named Kangho, is a pillar attributed also by some to Parasu Rama, and by others to Bhim, the son of Pandu; but most people call it merely the staff (lath), and have no tradition whatever concerning the person by whom it was made. It is much more elegant than the one near Bhagulpoor (*Plate* 5, No. 2), stands erect, and is 24 feet high. The base for about four feet is a quadrangle of 22½ inches a side, and has a Buddha on its west face. The image is naked, and stands before a large many headed serpent, while there is a votary at each foot. The shaft for about seven feet is octagonal,

and on two of the faces has an inscription of 12 lines, tolerably perfect, which has been copied in the drawing. The character differs much from that on the pillar at Bhagulpoor, and still more from the Devanagri now in use, and has some resemblance to that in the ruins of Mahabalipoor south from Madras. The upper part of the shaft has 16 sides, alternately wider and narrower. The capital is about 6 feet long, and is not easily described, but near its upper end is quadrangular, with the figure of a standing Buddha carved on each face. A large spike, apparently metallic, is inserted into the top of the pillar, and it probably supported an ornament of the same material. The pillar has stood in a small quadrangular area, which contains a well, and has been surrounded by a brick wall, and probably by some small chambers. Near it are two small tanks. One is called Purayin, or the tank of Nelumbium leaves. Beyond this is the village of Kangho, situated on a heap of rubbish, which has probably been a temple. The other tank is called Karnai, and surrounds on three sides a space, on which there is a small temple of chiseled brick, in the usual pyramidical form; but, like those at Buddha Gaya and Koch in Behar, it contains two apartments, one above the other. The door into the lower is not 3 feet high, and a window equally mean is the only aperture in the upper, which contains no image, and the temple is entirely deserted. Much of the foundation has been removed, whether in an attempt to destroy altogether the building, or in search of treasure, I did not learn. In the lower chamber I found two fragments of images, which probably had been broken by some zealot who was offended by their heterodoxy. One had represented a person standing, but only the two feet and a female votary seated at one side remained. Two persons had been standing behind the female, but only their legs remain. The other fragment contained the figure of some quadruped very much defaced, but probably intended to represent a buffalo.

Barahalgunj is a very small jurisdiction, a large proportion is subject to inundation, and the water collected in the floods forms in the centre of the division a kind of lake called the Bherital, which is about seven miles long and four wide, but not deep. As the water dries up, some part is cultivated with spring rice, a cultivation that might be much increased

on the lakes of this district. On the whole the country is tolerably occupied, and the plantations for this district are rather moderate. There is no dwelling house of brick, but 50 mud walled houses have two stories, 20 of them being covered with tiles, and 30 thatched; 500 huts with mud walls are tiled, so that on the whole no division in the district has such good houses. Of the remaining huts 11 parts have mud walls, and five parts those of hurdles, and all these are thatched with grass. Barahalgunj is a town that contains 200 houses, many of which are covered with tiles. No other place deserves the name of a town.

Gajpoor.—A large forest occupies the centre of the great mass of the division, which is on the left of the Rapti, and separates the clear part into two portions, that differ a good deal in appearance. That to the east of the forest is exempt from inundation and very beautiful, containing numerous fine plantations, with clear open lawns between, for only a small proportion is cultivated. Between the forest and the river is lower, with many small stagnant pools. This also near the forest is quite overwhelmed with plantations; but among these there is a greater proportion of cultivation. Near the Rapti a great extent is deeply inundated, is bare of trees, and overrun with dismal reeds, while very little is cultivated. On the right of the Rapti the only woods are near Gajpoor, and these are of no great extent. The country is higher than on the opposite side, and is overwhelmed with plantations now nearly wild; but among them there is a good deal of cultivation. There is no house of brick except one at Gajpoor, which was built by Raja Prithwi Pal of the Sirnet family, to which the whole vicinity belongs. It has become an entire ruin. There are 50 mud-walled houses of two stories, of which 35 are covered with tiles, and 15 with thatch: 200 mud-walled huts are covered with tiles. Of the remaining huts, all of which are thatched, $\frac{15}{16}$ have mud walls, $\frac{1}{16}$ walls of hurdles. Gajpoor, where the officers of police reside, contains about 225 houses, is a sorry place, and is so buried in woods, that it looks still worse than it really is. Rudrapoor is the largest place in the division, and contains about 300 houses, nearly as sorry as those of Gajpoor. Madanpoor, formerly the royal residence of the Tharus, contains about 150 huts.

The chief place of Hindu worship is the temple of Dudnath, which belongs to a convent of Atithis of the order of Bharathis. This house has a considerable endowment in land, and besides occasional offerings, the owners clear from 6 to 700 rs. at the Sivaratri, when 2,500 votaries usually assemble. The Mahanta who has also a large herd of cattle, and a flock of people in whose ear he blows, is an ignorant impudent beggar; and notwithstanding his receipts has much appearance of poverty, although the convent is tiled, and rather better than the common huts of the country; but his whole means are squandered in keeping a Sadabrata, where he gives a day's entertainment to all that apply. The temple is surrounded by a high wall, and consists of a small pyramidal Mandir of brick very rude, and surrounded by a flat-roofed gallery with one door in each side. The image of Siva, to whom a temple of such celebrity is dedicated, of course came to its place without human aid; and in the most remote ages of the world; but according to the priests it was not discovered until after the authority of the pure Rajputs was established. A cow as usual, pouring her milk on the ground, an opening was made, and the god brought to light. It is on this account that the image is called Dudnath; and the belief of the votary is confirmed by the image being in a very low place, in consequence of the earth having been removed when it was discovered. Another account may be given, which to some will perhaps appear more satisfactory. The wall surrounding the temple seems to be built on heaps of rubbish, and there are traces of many ancient buildings, which seem to have surrounded an open court where the temple now stands, and which is of course lower than the ruin of the buildings by which it was surrounded, and which have been pretty large. The temple which the pure-born chief first built was very small, and is supposed to be included within the present Mandir, which was formed by adding to the thickness and height of the walls of the chamber. This pious work was performed by Raja Bodh Mal of the Visen tribe. The temple was afterwards repaired by Raja Rupa, the great great grandfather of the late Raja Pahelwan Singha, who died since the English took possession. The gallery was added soon after, as since that event there has been a succession of 10 Mahantas. The ruined temple, in which that of Dudnath has been

built, is probably of great antiquity, being in the centre of ruins attributed to a Raja of Kasi. Between the outer gate and the gallery is a small modern temple or chapel, in which are a Lingga, and some old images placed round. In one corner of the area round the temple is a small chamber, in which is an old image (*Plate* 6, A), representing what in Behar is usually called Hargauri, but called Devi by the chief priest, although the male deity is as usual the most conspicuous of the figures.

Under a large tree, a little south from the outer gate of the temple have been collected various fragments and images, which were discovered in the ruins. The most entire are as follows. One of the kind, which in Behar is usually called Vasudev, a Buddha (*Plate* 6, B), a Ganes, and part of a door or niche. much in style of the Siviras.

A little west from Dudnath is the south-east corner of the Sahankat, or fortress of the mighty chief, which is universally attributed to a Kasi Raja. Nor does tradition carry the possession of the country to any previous chief. The fort is entirely overgrown with forest, which would render it difficult to trace the walls; and to do so would require a week's labour, which I did not choose to spare. I was told by intelligent persons, that the walls form a quadrangle of about a coss from east to west, and rather more from north to south. In the corner into which I penetrated, I saw a few small heaps of bricks, and I am told, that there are many such; but no traces of any great building. The defence, so far as I saw, has been a brick wall about six feet thick, and probably very high, as its ruins form a high wide mound. On the north-east and south sides has been a ditch; a small river ran along the west face. This, it must be observed, was probably the chief town of the Kasi Raja, while his residence was at the Sahankat in Rajdhani Mauza. The two Sahankats may be about seven miles distant from each other.

East and south from the south-east angle of the Sahankat in this division, are many heaps of bricks and tanks, including Dudnath, and extending to a very considerable distance. The whole is called Hangsa Tirtha, or the sacred place of the goose, the emblem of Brahma, whom I take to be the same with the Maha Muni of the sect of Buddha. These heaps and tanks from their form, and from the number of images that

2.

B.

Image at Dudnath.

1.

A.

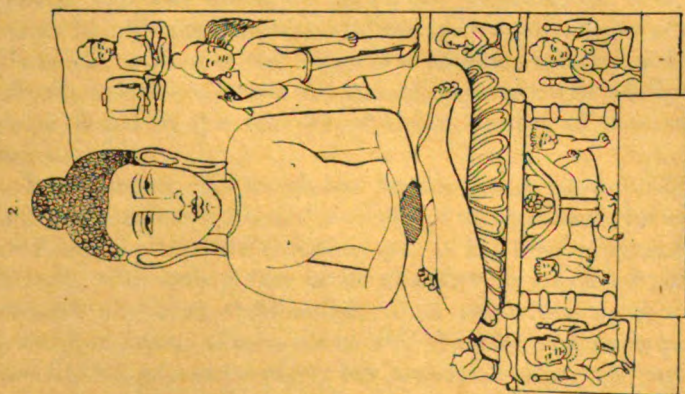



Image at Dudnath.

London. 1838. W. H. Allen & Co. 7, Leadenhall Street.

J. Netherclift Lithog.

have been discovered in them, I have no doubt, are the ruins of the places dedicated to religion, that belonged to Kasi Raja, as is usually alleged. It is said on the spot, that the founder was an associate of Karusha, a prince of Kikat, who pretended to be the Krishna, and was supported in this claim by Kasi Raja, until both were killed by the true Krishna. When Kasi was killed, his head rolled of itself to the holy city, whose name he bore, for he was a saint. He had intended to have removed the seat of religion from Kasi to Hangsa Tirtha, and as the people here say, to have erected in the new city 100,000 Linggas and 330,000,000 images of other gods; but he found that this would not have been agreeable to the deity. In the notices concerning the Rajas of Kasi I have observed, that the Nij or proper Kasi is said to have very early been founded by a prince of the family of the sun, who adhered to the worship of the Buddhas, and that very soon afterwards it became the property of Kasi, a chief of the family of the moon, one of whose descendants was killed by Krishna, but the ancestor and descendant are usually confounded by the modern Hindus, just as they confound the Janaka, who gave his daughter in marriage to Rama with his descendant, who instructed Duryodhan in the use of the bow; and as I have said, it is most probable, that the ruins here ought to be attributed to a later Kasi Raja, than even the person who was killed by Krishna. Whoever he was, he seems like his predecessors, to have been a worshipper of the Buddhas, as besides the image of a Buddha, which has been already mentioned, most of the other images are similar to those found in the temples of Behar, or are of heterodox form.

The chief temple, which has been a pretty large building, is about a mile S.E. from the corner of the fort, near the town of Rudrapoor. Like Buddhagaya, it has been a pyramidal Mandir, with only a very small chamber in its lower part; and has also been surrounded on all sides by a number of lower buildings. The walls of the chamber remain in part, and the image is in its place, but has lost its legs, and part of its arms. It is in the usual form of those called Vasudev, in Behar, but on each side has the lion rampant of Gautama (see *Plate* 4). It was discovered in taking bricks for building a new temple, and is called Jagannath, but has not become an

object of worship, and has no resemblance to the hideous figures usually called by that name. A very long canal extends east from this temple, and is called Sukla-dev-Sagar. Another called Siva Sagar, extends north. There are two others (one named Kamaldaha), but the four do not enclose a space; and, although like wide ditches, the earth having been thrown up on both sides, they could not have been intended as fortifications. On part of the ruins adjoining to this old temple, the late Raja Pahelwan Singha built a small temple, the charge of which he gave to the Ramanandis, and placed in it another image, which was taken from the ruins, and which resembles that called Jagannath, but it has received the name of Chhatrabhoj. Before this temple, in the area, are placed three carved stones. One is a small quadrangular pyramid, exactly similar to those found near Benares, on both sides of the Ganges, in the works attributed to the Siviras;* and I have already mentioned another fragment of that people, but according to the universal tradition on the place, the Kasi Rajas were succeeded by the Gorkhas, whom I consider as having been the same with the Siviras, so called as followers of Gorakhnath; and, as I have said, the original founder of Dudnath probably belonged to this tribe, although they are said to have been expelled by the Tharus, and these by the Visen, before the country fell into the hands of the Sirnet Rajputs. But even the temple of the Siviras had probably gone long to ruin, or was considered as heterodox, when Bodh Mal, the Visen chief, discovered the Siva Lingga, and erected over it the small temple, as already mentioned.

The two stones that accompany the quadrangular pillar before the temple of Chhatrabhoj, contain similar figures. The chief personage in each has a flower in each hand, like the images called Surya, in Behar, but differs a little from those of that district (*Plate* 7, *Fig*. 2). Under a tree some way north from this last temple, is an image which the natives call Nabakusa; but it represents only one person, seated like a Buddha (*Plate* 7, *Fig*. 1), while Naba and Kusa were the two rebellious sons of Rama, king of Ayodhya. Except the places of worship in Hangsa Tirtha, just now mentioned, the Hindus have none that is remarkable. Every village has its sthan, or place for

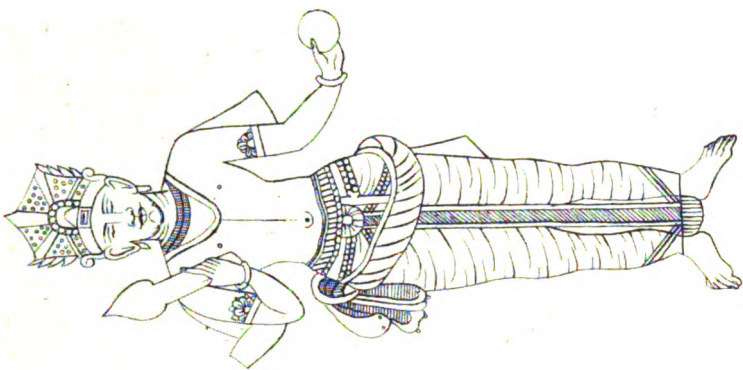
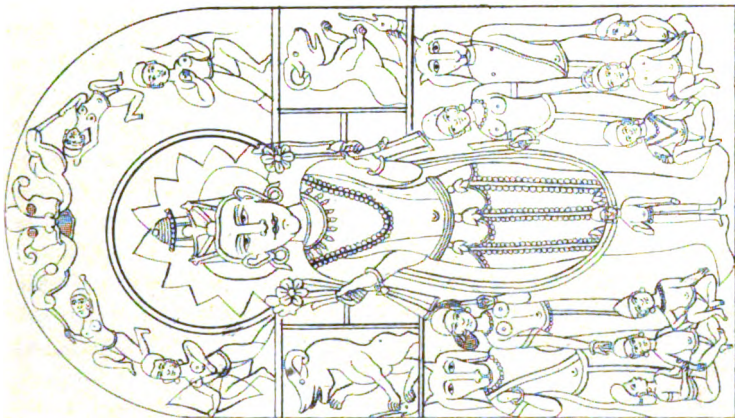
* See Vol. I. plates vii. and viii. of similar figures.—[Ed.]

1.

Called Nabakusa.

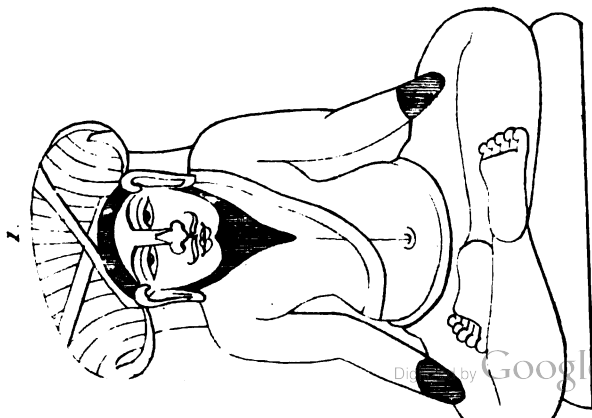
2.

Surga.

3.

Near Amorha.

Images found at Hangestirtha, near Rudrapur.

London. 1838. W. H. Allen & C° 7 Leadenhall St

J. Netherclift Lithog.

appeasing the wrath of malignant spirits, but none of these belong to the sacred order. The canaille address themselves to Nawardev, Chauwa, Mita, Sing Rai, Devi, Bachhila, Akas-kamini, Mahavira, Samardhir, Amana Sati, Goriya, Kay-lavir, Bandi Chawani, Sokha, and Sambhunath, who are called the village gods (Dihuyar); but many scruple to worship these gods of the vulgar, and sacrifice at places dedicated to Kali Bhawani.

Besides the remains of antiquity connected with Hangsa Tirtha, there are 20 or 25 old forts or castles, attributed to the Tharus, and usually called Dihi. The only one, however, that is considerable, is at Madanpoor, so called after Madan, the Tharu chief. It is situated south from Rudrapoor, near the Rapti, and at no great distance from the Dewha. On the outside of the town is an image of Siva called Charitranath, which is generally supposed to have belonged to this chief. The Rajput chiefs had many strongholds in and near the woods; but they were all dismantled by Major Rutledge.

Bhewopar.—A great deal of this division is flooded in the rainy season, and as the floods retire, many lakes are left; but the higher parts are much intermixed, so that the view in the rainy season must be singularly beautiful, the higher parts being finely wooded, partly by a forest, partly by plantations, and there is a good deal of cultivation. Two of the lakes, Nanaur, and Naur, are of considerable extent, but neither is deep, and in spring the latter dries up two-thirds of its breadth. The former is about three miles long and one broad, and in many parts is deep, but these parts are only narrow, and wind through shallows covered with reeds, so as to be scarcely distinguishable from the shore. There are 24 or 25 small ones, which seem chiefly to have been old channels of rivers. The most remarkable is Kungra, which may be half a mile in length, and 200 yards wide. Its banks are high, and the water deep, and free from weeds. The natives, being seldom well provided for experiments, imagined it to be unfathomable, and, of course, that it had been dug by some god. The late Raja Pahelwan Singha, however, discovered that the bottom might be reached; but, perhaps with a view of not shaking too much the people's belief, and passing for a liar, he gave out that it was above 100 cubits deep. I found it 62 feet. As the waters of the vicinity dry up, vast quantities of

fish retire to this deep recess, and are followed by many crocodiles. There is no house of brick. Seven houses with mud walls have two stories, and two of them have tiled roofs; while of the huts, eight have a similar covering. Of the remaining huts, which are all thatched with grass, $\frac{18}{16}$ have mud walls; in the remainder hurdles have been used, chiefly by new tenants, who will not be at the trouble of building mud walls, lest they should not come to a fixed abode. Bhewopar, where the office of police stands, contains 125 houses, huddled together, and buried in a thicket, the remains of a hedge, by which the town was defended. The only house that is tiled belongs to a chief of the Sirnet. No other place deserves the name of a town.

Gnaula.—None of this division is subject to inundation, nor does it contain any remarkable lake nor marsh. It is entirely overwhelmed with trees, partly spontaneous, partly plantations, and among these wind narrow lawns, very poorly cultivated. There is no house of brick. Three houses with mud walls have two stories, but are thatched; and two of one story are tiled. Of the remaining huts, which are all thatched with grass, 15 parts have mud walls, and one part walls of hurdles. Gnaula, where the officers of police reside, contains about 140 huts, not one of which is tiled, nor has two stories. Even the mud castle of the high-born chief consists of thatched huts, surrounded by a ditch and hedge. The town of Gnaula is so surrounded by bamboos and trees as to be with difficulty accessible. No other place can be called a town.

At the convent in Rampoor is a brick chamber, where some images, adored by the sect of Rama, are disposed. They are worshipped by many, although there is no great assembly. Almost every village has three open places for the worship of destructive spirits. One is dedicated to the deity of the village, a low god, whose priests are of the dregs of impurity. The second is dedicated to the spirit of some Brahman, who has died a violent death. The third is dedicated to Kali, and has been erected in consequence of the English government, she being considered by the Hindus as the protecting deity of that nation.

Gopalpoor.—Between the Koyane and Sarayu, the country is subject to inundation, and is bare and dismal, much of it

being waste, and overgrown with withered reeds. On the left of the Koyane, the country looks better, there being numerous plantations, and much of the waste land is covered with short grass. There are some small woods, but much stunted, and there is a good deal of poor land, covered with thorns. There are many small pools, and old water courses, very useful for agriculture, but by no means ornamental. Gopalpoor contains about 150 houses, two of them of brick, and several of them tiled. It has been fortified by a rampart of earth, and a bamboo hedge, now ruinous. Shakpoor contains 250 houses, no other place deserves the name of a town. Two houses of brick in Gopalpoor belong to the chief of the Kausika tribe. There are ten houses of two stories, with mud walls, of which one-half is covered with tiles, and one-half with thatch; $\frac{1}{16}$ of the huts have tiled roofs, and all have mud walls. All the thatch is grass.

There are the ruins of about 100 petty forts (Garhi or Kot), which were built by different chiefs of the Kausika tribe, but were finally destroyed by Major Rutledge. The only remain of antiquity at all remarkable is at Dhuriyapoor, on the left bank of the Koyane. It is said to have been the abode of the chief prince of the Tharus. Afterwards to have been occupied by the Bhars, and finally by Nara Chanda chief of the Kausika tribe, and the traces of three successive ruins may be distinguished. The ruin, which may be attributed to the Tharus, as most usual with those of that people, consists merely of a large space elevated very high above the country, and composed of broken bricks. The elevation here is less extensive than several others that I have seen; but a large part may have been removed by the river, otherwise I should not think it suited by its size for a royal abode. Its southern extremity has undergone no alteration from the works of subsequent chiefs, nor is there any trace of a ditch round it. On a corner of this is a small temple of Siva rather ruinous, but without any appearance of considerable antiquity, and covered by a dome in the Muhammedan style; but the image would appear to be very old, as notwithstanding its simple form, it is very much decayed. It is therefore probably coeval with the Tharus. On the upper end of this ruin, and farther north along the bank of the river, the Bhars have constructed a fort, which extended about two-thirds of a mile

along the river, and has been narrow to the south, but wide towards the north, unless part has been carried off by the stream, as is probable. The southern end, built upon the ruin of the Tharus, has had a rampart of brick, with a ditch between it and the northern end, or town, which has been only fortified by a ditch, and rampart of earth. This is the largest place attributed to the Bhars that I have seen in this district, and has probably been their capital, rather than that of the Tharus. Their most powerful chief, however, probably resided far east at Gar Samaran, in the district of Saran. The castle of the Kausika chief has been built within the ruin of the citadel of the Bhar, and has consisted of mud walled buildings, surrounding two courts. It is totally ruined.

SANICHARA.—The banks of the Ghaghra are subject to inundation, and in many parts are barren or poor sandy swells covered with tamarisks or thorns. Even where the soil is good, they are rather dismal, being bare of trees, and a good deal being waste, and covered with withered reeds. The higher parts, in their centre, contain two long stunted forests very ugly, but the remainder is beautiful. Towards the east end of the division the plantations are too numerous, and there is a good deal of waste land, but towards the west the country is well occupied, and the plantations are moderate. Intermixed with the mango, they contain many Mahuya trees and bamboos. There is no house of brick; but 35 houses have two stories with mud walls, 10 of them covered with tiles, the others with thatch; 300 mud walled huts have tiled roofs. Of the remaining huts, which are all thatched with grass, three-fourths have mud walls, and one-fourth has walls of hurdles. Sanichara, where the officers of police reside, contains only 60 or 70 houses buried in a thicket. Hariharpoor contains 150, Mehesong 150, and Gaighat 115. Three ruined strongholds are the remains of the fastnesses formerly occupied by the Suryabangsi chiefs, to whom the country belonged. That at Mahauli was for some time the chief family residence, and has been erected on a heap of brick rubbish, said to have been an ancient seat of the Tharus. The modern fort was surrounded by a rampart of brick, within which have been several buildings of the same material. It was deserted 30 or 40 years ago in consequence of a great sickness in the family, supposed to proceed from

divine anger. The place is surrounded by forests, as a defence against the Muhammedan cavalry.

MAHUYADABAR—Very much resembles Sanichara, that is, it has a bare sandy tract on the side of the Ghaghra, and several stunted forests in the centre, and along the northern boundary. The whole, however, is as well cultivated as the western parts of Sanichara, and the plantations as moderate as there, although many still are superfluous. There are many small pools, and one of some consequence named Ghanda Tal,* which at the end of the rainy season is reckoned 1½ coss long, and one broad. The Raja has in his house one room of brick. There are 100 houses of two stories with mud walls; 70 are covered with tiles, and 30 are thatched. There are 200 huts with mud walls and tiled roofs. Of the remainder, all thatched with grass, 31 parts have mud walls, and one part walls of hurdles. Mahuyadabar is a scattered place buried in plantations, but contains 200 houses, many of which are tiled, and some have two stories. Piparaich contains 200. Ganespoor 200, many of them good. Part is surrounded by a rampart of earth, a ditch, and bamboo hedge, and is still occupied by many houses of a younger branch of the Gautamiya chief's family, although the property has been alienated. Nagar contains 100 houses, among which is that of the Gautamiya chief. The whole is defended like that of his kinsmen, and the defences are in good repair. Uji contains 100 houses. Kaptangunj has only 25 shops; but it is a small military station, and the residence of the native collector of revenue.

KHAMARUYA entirely resembles Mahuyadabar, except that it has scarcely any forests, and that in place of one great lake it has several, which, although very long, are quite narrow, so that they seem evidently to have been channels of rivers. The most remarkable are at Hyderabad, Panchos, and Sisauni. These are called Jhils. The person called Raja has a small brick house of two stories. About 100 houses of two stories have mud walls, but only two are covered with tiles, the others are thatched. Only 15 mud walled huts are covered with tiles, which the people here still consider as unlucky. Of the remaining huts 31 parts are

* *Tal* generally signifies a marsh, and *Jhil* a lake.—[ED.]

thatched with grass; and one part with rice straw; 15 parts have mud walls, and one those of hurdles. Khamariya, where the police officers reside, including an adjacent market place named Khankala, and a hamlet called Chhauni, does not contain more than 100 huts. Amorha, which is about a mile distant, and Sekundurpoor contain each about the same number.

There is a very long winding canal, extending from near Amorha to Rupnagar, another seat of the Suryabangsi family, who long held the vicinity. It is said to be 1½ coss long, and is about 30 yards wide, but in many places is nearly obliterated, and bears every mark of high antiquity, while there are on its sides several heaps like the ruins of old buildings, but very much reduced by the action of time. The Raja attributes the work to a person of his family named Radal Singha, but it seems much too old for his time. In digging on the north side of this canal, the Raja's grandfather discovered an image, which has been placed in a mud walled hut, called the lord's house (Thakurvari), and is grotesquely clothed, being now considered as the family deity. It is a complete image, and not a carving in relievo as usual in Hindu images; nor has it any attendants (see *Plate* 7, *fig*. 3). It is about the human size, nor have I before seen any such. The Raja says that its history previous to its being discovered by his grandfather is totally unknown; but the priest calls it the keeper of Bali Raja. Bali was the son of Birochana, the son of Prahrada, the son of Hiranyakasyapa, the son of Kasyapa. Bali was father of Banasur, who was killed by Krishna, while Bali was driven to hell by Vamana, the incarnation of Vishnu, and son of Kasyapa, and therefore great grand uncle of Bali. These anachronisms probably arise from many omissions in the collateral branches of Kasyap's descendants, while the family of the moon, to which Krishna belonged, is detailed at full length. Bali however was of such consequence, that, after an incarnation of Vishnu sent him to hell, it was necessary for so great a deity to remain there and watch him; and the priest alleges that this image represents that incarnation. It has however no resemblance to the other images of Vamana that I have seen, either when represented as one of the 10 Avatars, or as Gadadhar, by which name he is also called, on account of the arms which he carries. This however may

be the true form of Gadadhar, as those so called in Behar seem to me to have been improperly named. The priest farther says that this image was placed here by Ambarisha, a king of Ayodhya of the family of the sun. The Moslems destroyed the temple, and threw out the image, which was afterwards found by a potter, and placed where it now is by Ranjit Singha, uncle of the present Raja.

Although the chiefs, who have of late held the country, call themselves Suryabangsis, and claim a descent from the family of the sun, they admit that their ancestors had been long driven to the west, and that on their return they found the country in possession of the Bhars. A heap of ruins, containing, it is said, about $\frac{2}{3}$ of an acre, is attributed to this people. The Suryabangsis after their return had many small strongholds all destroyed by Major Rutledge, and none of them are now worth notice.

VAZIRGUNJ very much resembles in its appearance the last two described. The banks of the Teri, like those of the Ghaghra, are low and bare; the northern skirts are covered with stunted forests, and the great intermediate space is tolerably cultivated, and has a superfluity of fine plantations, although it is not so much overwhelmed as many parts of the district are. Long narrow pieces of water are very numerous, and highly advantageous to the cultivator. Many of them are shallow, and covered with weeds, but three near Vazirgunj are deep and clear. They are in the shape of crescents, and render the vicinity very fertile and beautiful, on which account the Nawab Vazir had on their banks a hunting seat and garden, which are still kept in repair, although they have not been visited since the country was ceded to the English. In a country where the arts are so far behind, although not grand, these works are very ornamental. Except this seat of the Nawab's there is no house of brick; 125 houses of two stories have mud walls, 25 of them are tiled and 100 thatched. Of the huts $\frac{1}{32}$ part has mud walls and tiled roofs. All the others are thatched, but $\frac{30}{32}$ have mud walls, and $\frac{1}{32}$ have walls of hurdles. The only thatch, as usual in this district, is grass. Vazirgunj, so called from the neighbourhood of that prince's seat, contains 114 houses. Shahgunj 115, and Namti 103. These are the only places in the division that can be called towns. The chief place of worship among the

Muhammedans is the monument of Katila near Vazirgunj. Katila or Hatila was sister's son of Musaud Gazi, a chief in the army of Mahmad of Ghijni, and sister's son also of that bloody zealot. Musaud obtained martyrdom, and is buried at Baharaich. His nephew also became a martyr, having been mortally wounded in combating the infidels on the spot where the monument in this district stands. He was buried with his uncle at Baharaich, at no great distance in the dominions of the Nawab Vazir. The monument here is built of brick, and in good repair, but it is rude, and by no means so ancient as the time of Hatila. It was probably erected by the Vazir, who built the hunting seat, I believe the late Asfud Doulah. About 1000 people assemble on the day of the saint.

The monument is seated on the corner of a ruin, apparently of great antiquity, the whole being reduced to heaps of rubbish. The Fukir, who has charge says, that it was a fortress belonging to the Bayes Rajputs, to whom the country now belongs, and that Hatila was wounded in storming the place. These Rajputs however say, that it is only five or six generations since they came to this part of the country, having then left Bayeswar, their original seat, between Lakhnau and the Ganges, in consequence of a famine. They attribute the work to the Tharus, nor has it any appearance of having been a fortress, but seems rather to have been dedicated to religion; its present name is Asokpoor. There seem to have been many small buildings scattered in a line of about 500 yards in length and 150 in breadth from north to south. The principal heap is near the west end, and has probably been a solid temple, having left a conical mound without any cavity in the centre. A little east from thence is a smaller heap, on which remains a large Lingga, round which, within these hundred years, a wall has been built, but it is not an object of worship, and a wild fig having taken root on the Lingga, will soon cover it. When that tree decays, the Lingga will probably be discovered, and then may be more fortunate in obtaining worship, should the great god continue so long in fashion. About a mile from this ruin, and probably connected with it in the same manner as the ruin near the temple of Buddha at Kasi, and that near the Dewhara of Matakumar at Kesiya is a conical heap of rubbish, on

which there is another Lingga that has of late become fashionable. The Mahanta or chief of a great convent at Setubandha Rameswar, near Cape Comorin, moved probably by weighty arguments sent from hence, gave notice through the Ramanandis of Ayodhya, that he had discovered the efficacy of bathing in Parwatikund on the side of Mahadeva Jhil, one of the lakes near Vazirgunj. The first assembly took place this year in Jyaishtha, and amounted to 5 or 6000 people. After bathing in the Kund, the pilgrims worshipped this Lingga. The flock do not know how the Mahanta came by his knowledge, nor does it enter into their imagination to doubt what he says, nor to inquire into the circumstances.

At Nagoya is a place dedicated to the goddess (Devi), where in the Autumnal Dasahara many people, chiefly Rajputs, offer sacrifices of buffaloes and goats. A Brahman is priest. Every old mauza has a place dedicated to its deity; but, although there is a Brahman attached to each village, he does not attend this low place, but the cobblers act as priests, and the Brahmans are content with a share of the profit. Many mauzas have also a place for the worship of the ghost of Ratna Pangre, a Brahman. Besides the ruin at Asokpoor attributed to the Tharus, I saw another, said by some to belong to the same people. It is called Gauradihi, or the ruined fort of Gaura. It is very trifling, and situated on the north side of Vazirgunj. Others allege that it belonged to Achal Singha, a Kalahangsa Rajput, which I think is the most probable opinion, as it resembles the works of the present Rajput chiefs, that is, it has been a slight rampart, and ditch, surrounding a few small buildings of brick, and mud walled houses. The rampart, ditch, and a few heaps of bricks remain. After the Tharus, the country belonged to the Dom or Domkatar tribe. The chief of this tribe is said to have lived at Domdiha, in the N.W. part of the division. The ruin of his house, for it has no appearance of having been a fort, occupies a roundish space, about 600 yards in circumference, and consists of brick rubbish, forming an elevation tolerably level above, and covered with trees. It has every appearance of great antiquity, and entirely resembles several of the ruins attributed to the Tharus. A small tank, a little west from the heap, is also attributed to the Dom Raja, whose name tradition has not preserved. The Dom were succeeded

by the Bhars, who have left no traces. Then came the Kalahanga tribe of pure Rajputs, who were expelled by the Visens from Gandha, a large Pergunah in the Nawab's country, on which account this tribe called their new acquisition Gandhahakaraj. When Major Rutledge took possession of the district, this tribe and its vassals had about 100 petty forts, all of which except a mud castle belonging to a Kanungoe, were destroyed. No one durst inform against this scribe, the office which he held rendering him master of the country.

NAWABGUNJ.—This division is entirely confined to the town of Nawabgunj, which, according to the officers of police, contains 1059 houses. Nawabgunj was founded by Suja ud Doulah, and its situation was judiciously chosen on the edge of the country subject to inundation, and opposite to Fyzabad, his capital city. It served therefore as a mart, where all the farmers from the northern districts of his country might bring their grain, and dispose of it to the merchants of Fyzabad, who carried it across the various branches of the Ghaghra, which here may be said to occupy a space of about four miles in width. This trade is still carried on with great spirit. The town extends about ⅓ of a mile each way; and, as usual, has very narrow crooked streets. The place, like all others near Ayodhya, swarms with religious mendicants, and the necessitous poor are numerous. It contains four houses of brick; 250 mud walled houses of two stories, of which 200 are tiled, and 50 thatched; about 500 tiled huts, and 300 that are thatched, all with mud walls.

MANIKAPOOR—Is entirely exempted from inundation, but it contains several small marshy lakes. The most considerable is at Manikapoor, and, the water opposite the town being pretty deep and clear, it looks well from the old castles also of the Raja being on its banks. A narrow forest winds through the division, and connects itself with one of great length, that runs along the banks of the Bisui and Koyane. Until the establishment of the English government, this forest had been long the resort of robbers, and the family retreat of the Raja, who was generally refractory. Besides this forest, the country is overwhelmed with plantations of Mahuya chiefly, and trees of the same kind are scattered through many fields; but, the intermediate spaces being well cultivated, it would be very beautiful, were not the houses uncommonly wretched.

On the bank of the lake at Manikapoor, the Raja had two castles, with buildings in both of brick, and of a considerable size, although only one story high. The works have been dismantled, and the hedges, their principal strength, cut down. The buildings in one are entirely ruinous, and those in the other are not in good condition, although the Raja sometimes occupies them; but he lives generally in the forest, and his father lived there entirely. He is there building a small brick house, in imitation of those used by the English. There are 35 houses of two stories, with mud walls; ten are tiled, and 25 are thatched. Ten mud-walled huts have tiled roofs. All the remainder are mud walled, and thatched with grass; 25 of them have wooden doors. Manikapoor contains only 90 houses, and suffered much during different sieges, which the castles sustained, when the Rajas were refractory. Bhetuwara contains 150, and Bidwangar 125 houses.

The Muhammedans are very few in number, and have no place of worship worth notice. Nor have the Hindus any one that attracts an assembly. On the side of the lake opposite to Manikapoor, is a lingga, surrounded by a wall, as is also a place dedicated to (Bhawani) the goddess, which is near, and has no image. I went there in search of an old abode of the Tharus, and the priest of these temples offered himself as a guide to the curiosities, thinking, probably, that his charge was the only thing worth visiting. He took me first to the the places of worship, and then desired me to dismount, and pray to Bhawani. I said, that I never prayed to that deity, on which he turned round and said, then worship Siva. When I replied that I never worshipped that god either, he stared with astonishment. He afterwards led me to a petty mud fort (Kothi), which belonged to a late Rajput chief, and denied all knowledge of the Tharus. Being disappointed, I gave him nothing, and he left me muttering, no doubt considering me as a most unreasonable infidel. A decent farmer afterwards showed the ruin of the Tharus residence, Basgit as it is called. It consists of a space about 400 feet long, and 100 wide, covered with small heaps of brick rubbish, without any traces of fortification, and has probably been a large house.

At Hatni, in the east corner of the division, is a ruin of the Tharus. It is on the skirts of a forest, and may contain 150 acres, covered with heaps of bricks. There are no traces of

fortifications. Offerings are still occasionally made at a place (sthan) dedicated to the keeper of the gate (dwarika) of Hatni, but there is no image.

At no great distance east from Hatni, is Gopha, another old ruin of the Tharus. This is similar to Hatni, being a space covered with heaps of brick rubbish, without any traces of fortifications, and covered with trees so thick as to prevent me from tracing its extent. It was said by the people of the vicinity, to be about 5000 cubits round. At Khejuri, 3 coss west from Manikapoor, at Kopa N.W. 3 coss, at Mahewa, $2\frac{1}{8}$ coss W., at Satya, 4 coss W., and at Kahowa, 5 coss W., are said to be similar monuments of the same people, but I had no opportunity of examining them. After the Tharus, this country was subject to the Bhars, who have left no traces behind. Then came the Bandhulgotiya Rajputs, who were succeeded by the Visens. Both these had many petty forts, all now destroyed. Several of them, until the English took possession harboured notorious robbers, chiefly illegitimate branches of the Raja's family.

SALGUNJ—Is exempt from floods, but contains many long, narrow, and shallow pieces of water, highly favorable for agriculture. The whole northern boundary is skirted by a forest, forming a part of the very long wood, that runs along the Bisui and Koyane. The remainder is tolerably occupied, and the plantations are somewhat moderate, and consist chiefly of the Mango.

There is no house of brick except some thatched huts in a village near the old ruin of Kotkas, which affords abundance of the material. Twenty-six houses of two stories have mud walls. Only one of them is tiled, the others are thatched. There are 10 mud walled huts having tiled roofs. All the other huts are thatched, a few with straw, but by far the greater part with grass: $\frac{31}{32}$ parts have mud walls, and $\frac{1}{32}$ part walls of hurdles. Lalgunj, where the officers of police reside, has no market, and only a few shops with 35 houses, chiefly of cultivators. The name implies the fine market town, and was given to it by some Nawab, who intended that it should be such; but he entirely failed in his attempt at improvement. Its original name was Virpur. No place deserves the name of a town.

There are Dihis or ruined abodes of the Tharus at Nagra

Bujruk south a little from the Thanah, at Patijiya Bujruk west 1 coss, at Dewgang south 2 coss, at Kotkas north-east 3 coss, and at Gurgang south-east 1½ coss. The three chiefs, who lived at Patijiya or Patiyari, at Kotkas, and Dewgang, are said to have been the most considerable. The ruin at Patiyari is a very considerable elevation of brick rubbish, which I judged by the eye to be 400 feet long, 200 feet wide, and 12 feet high. The people in the adjacent village say, that it contains 25 small bigahs, which would give an area of 202,500 square feet, in place of the 80,000, that I reckoned by looking at the place, so that I was probably much mistaken. It has every appearance of having been one edifice, nor is there the smallest trace of its having been fortified. Like most of the old abodes of the Tharus it stands by the side of a small marshy lake, which may formerly have been a tank. A small mosque, now in ruins, has been built on the heap, and near it is an old well with some traces of a cistern; but these probably belonged to the mosque. On the east side of the heap a fortunate scribe, about 50 years ago, discovered a Siva Lingga, which he, as well as his neighbours, some way or other, knew to have come there spontaneously in the most remote ages of antiquity. Whether or not it had escaped the notice of the Tharus is uncertain; but, where it stands, there are no traces of any old temple. The scribe on so happy a discovery surrounded the image with a wall, planted a mango grove, and dug a well. Notwithstanding all these circumstances not above 200 people assemble on the Sivaratri.

Katkas seems to have been a quadrangular brick castle, about 140 yards long by 120 wide, and it has been surrounded by a ditch, except towards the west, where there is a small marshy lake. On the outside of the ditch are many bricks, but these are probably the ruins of modern villages, built from the old materials, as I see is still the practice. The elevation of rubbish is at least 16 or 17 feet perpendicular height, and has evidently formed one edifice. About 200 yards east from it is a small tank, on the north side of which have been buildings of brick; and on its east side is a Siva Lingga, said to have belonged to the Tharus.

Dewgang, the seat of the third great chief of the Tharus, is of a roundish form, and about 230 yards in diameter, but

at least 20 feet in perpendicular height. There is not the smallest trace of fortification. It contains fewer fragments of bricks intermixed with the soil than is usual in the ruins of the Tharus, which in general consist chiefly of bricks reduced to small fragments; and its surface is covered with fragments of earthenware, as is usual about native villages I presume, therefore, that its elevation is owing to some village having been built on the spot, and that the ruin of the mud walls of the village conceal the bricks. Some deep excavations have been made, I suppose in search of that material. On the heap has been erected a small brick mosque now ruined; and south from it is a small square tomb, covered by a dome, and containing a man's grave. Where it stands, are the foundations of several brick buildings, on a level with the surface. Whether or not these belonged to the Tharus is quite uncertain. Although these are said to have been the abodes of the principal chiefs, some of the other ruins are no way inferior; and, although Dewgang is only two coss from Lalgunj, two other great buildings have intervened. Gurgang has been an edifice of a quadrangular form, about 230 yards long and 160 wide. Nagras has also the appearance of having been a single edifice of a roundish form, and of about 350 yards diameter; so that, allowing the building to have been quadrangular, and the ruins in falling to have spread considerably, we cannot allow that the building has been less than 600 feet square.

The Tharus, according to tradition, were expelled from hence partly by the Domkatars, and partly by the Bhars, and these again were driven out by the Kalahangsa Rajputs, to which tribe the present Raja belongs. The most remarkable place of Hindu worship is in a small marshy lake at the old seat of the Tharus called Gurgang. It is said to be mentioned in the Ramayan of Valmiki, that Dasarath the father of Rama, while lying in wait for game near a river, shot Sravan the son of Andhak Muni, mistaking him for a deer or wild beast. Andhak, although a Muni passing his time in silent contemplation of divine things, was of low degree; but being very holy, and withal rather irascible, he cursed the king of Ayodhya, who had killed his son, and in consequence Rama and Lakshman the king's sons passed 14 years in the woods, where they had many troubles. About

10 years ago it was somehow discovered, that in the Tharus old lake called Gandar Jhil in the vulgar language, there is a deep pool, and that it was there that Dasarath killed Sravan. It has also been discovered, that this had been the place where Gandharba, another silent contemplator, was wont to pray. On these accounts about 500 people assemble to bathe in the pool on the new moon in Magh. The claim to Gandharba Muni may be very good; but in the legend of Valmiki, there is a strong circumstance mentioned against this being the place where Sravan was killed; for it is there stated, that the unfortunate affair took place on the Tamasa, a river, which passes Azemgar, and is called Tangus (Tonse R.) in the language of men.

DUMURIYAGUNJ.—A little of this division along the banks of the Rapti and Ami is subject to inundation; but it is too narrow to produce much effect on the appearance of the country. There are seven or eight marshy lakes; but the only one, that is considerable, is the Pathra Jhil in the north-west part of the division. It is 1 coss long, and $\frac{3}{4}$ coss wide. There are three considerable forests; one much stunted, running along the southern boundary, and two more stately on the banks of the Rapti. The remainder of the country is beautiful, with more cultivation than is usual in the northern parts of the district, but less than near the Ghaghra. The plantations, although in part superfluous, are somewhat nearer the bounds of moderation than usual in the centre of the district; and, except the woods, much of the waste land is clear pasture, while the remaining smaller portion is covered with long harsh grass. There is no house of brick; but 225 are of two stories with mud walls, and $\frac{1}{32}$ part is thatched with rice straw, while the remainder is thatched with grass.

Dumuriyagunj, where the police officers reside, contains 175 huts, very poor, but forming a straight wide street. It has been surrounded by a ditch, rampart, and hedge of bamboos, now neglected. It is finely situated on the banks of the Rapti, but does not possess one boat, except such as are used for ferries. Banpoor contains 100 poor huts. Wasa, where the Kazi resides, is not a market town, but contains some good tiled buildings. The same is the case with a very large village named Halawar, which is also occupied by

Muhammedans, chiefly the descendants of the saint from Arabia.

At Bharatbhari is a tank, where about 4000 bathe on the day of Rama Navami, and the full moon of Kartik. There are several tanks near this place, and adjacent to them is a considerable ruin. The people at Dumuriyagunj told the Pandit of the survey, that this belonged to Bharatbhari a Tharu, but the people on the spot told me, that it had been the abode of Bharata the brother of Ramachandra, and it is possible, as the Tharus assert, that both may be correct, and that the family of the sun were in fact of this impure tribe. The people, however, who called it the house (Vari) of Bharata were of the lowest order; but these often retain traditions better than the more learned, who are apt to be misled by modern legends, of which the vulgar are entirely ignorant. The ruin is a large heap of brick rubbish, of a very irregular form, but extending about 400 yards from north to south, and 350 from east to west. There have been some detached buildings, especially one of considerable dimensions towards the north-west, and the sacred tank is at a little distance towards the south-east. The great mass has evidently been a very large house, palace, or castle, with several small tanks encroaching on the sides, but no traces of a ditch. Owing to the space occupied by courts, or to the falling in of very large apartments, the surface is very uneven, although I could not trace any symmetry of form, or remaining walls; but so little soil covers the bricks in many parts, that my elephant could not walk on it without much difficulty. The elevation in some parts seems to be still about 20 feet perpendicular. The tank, in which the people now bathe, seems to me modern; for, as it retains its shape entirely, I do not think that it can be above two or three centuries old.

At Hathsuri, in Sangskrila Hastisunda, or the elephant's trunk, is another ruin attributed to the Tharus. It is a heap of brick rubbish about 220 or 230 yards square, and has no traces of a ditch. About the middle a circular heap rises considerably higher than the remainder, and has probably been a temple. About 100 yards east from this ruin, are some heaps of brick rubbish, on which are two Linggas, which have been surrounded by a brick wall. The people of the adjacent village, who are Muhammedans, attribute the

whole to the Tharus. About two years ago an Atithi seized on the Linggas, which until then had no priest. He has not procured as yet any assembly, nor has he indeed discovered anything remarkable about his images; but he is in the simplicity of youth, and as he grows older, will probably have at least a dream.

At Yamahana near Bhanpoor two images were discovered 10 or 12 years ago, in ploughing the field of a Brahman, who immediately dedicated himself to religion. On going to the place, I found that the field had been long cultivated before the images had been discovered, and a suspicion no doubt arises from this circumstance, as it it is only just possible, that the plough should have always missed them before, and hit them at the time when they were discovered. My suspicions were excited by the conduct of the discoverer, and of an old woman who lives with him. They were exceedingly agitated, and would scarcely answer any question, but talked incessantly, and rather incoherently about their discovery, which they called Rama and Lakshman. The images were clothed, and in a dark place, so that from their appearance I could draw no conclusions; but the people in the vicinity even seem to be suspicious, and the Brahman as yet has reaped little benefit from his discovery.

At Pengriya an image less liable to objection was found in September 1813. It is a stone containing the image of a prince or god with four attendants, and resembles those called Vasudev in Behar, only the hand, which has the mark of the lotus on its palm is turned up, in place of being held down. It was discovered by some children at play on the side of a tank, among a small heap of bricks, that had been there from time immemorial, and in which the foundations of a small temple about 12 feet by 20, may be traced. This heap was called Samayasthan, but the people of the village had no tradition concerning the person by whom the temple was built or destroyed, nor was it a place of worship, although Samaya is one of the tutelary deities of the low tribes most commonly worshipped in this district, and is said to have been a deity of the Tharus. It must also be observed, that a chief of this people resided at Hathsuri near Pengriya. There would be therefore be some reason to suspect that this image, resembling one of the most common in all old ruins; and called

Chaturbhuja Lakshmi Narayan, Gadadhar, Vasudev, &c., is in fact the Samaya Dewata of the Tharus. The name implies the deity of the seasons, time, or opportunity. In the present system however, a goddess presides over the seasons (Kalarupini). Vishnu is also called Kalarupa; but although Kala and Samaya have the same meaning, he is never, I am told, called by this latter name; yet some of the images like Samaya have the 10 avatars of Vishnu as ornaments. A Ramanandi of Ayodhya, having heard of the discovery, appropriated it to himself, has placed it in a hut, has anointed it with oil, and adorns it daily with flowers. He has not yet attracted many votaries, but is an active, diligent man. There are several old forts which belonged to the Kalahangsa Rajputs, when they held this division; but they have been petty works, and are entirely ruinous. The same is the case with some built by the Sirnets, who are now called Rajas.

Balti.—None of the district is subject to be regularly flooded. There are 10 or 12 marshy lakes, but none of them remarkable. The extensive forest on the banks of the Koyane runs through the middle of the division. A great part of it consists of plantations that have run wild, and it occupies a great extent. The remaining part of the country is beautiful, but loaded with useless plantations, and a large proportion of it is waste, partly covered with short, and partly with long withered grass. There are two houses partly of brick, one belonging to the Raja, and one to a kinsman. The former is included in a very sorry mud-walled castle; the other I did not see. There are of 110 houses of two stories, of which 10 are tiled, and 100 thatched. All the huts have mud walls, 10 are tiled, the remainder is thatched with grass.

Basti contains about 500 houses, and is surrounded by a ditch, and bamboo hedge about half-a-mile square. In this area are several empty spaces, and the Raja's mud castle takes up a considerable portion, so that the houses are much crowded, and the whole is more sorry than any place of the size in the district, and the people seem in the most abject state of poverty. Pakoliya contains 100 houses, and is the only other place, that can be called a town.

About a quarter of a mile south from the town of Basti, at Manhan, is a ruin attributed to the Tharus. It consists of a heap of rubbish about 200 yards in diameter, and very irre-

gular in form and surface, without any traces of a ditch. On the top is said to have been a Lingga, but some time ago it disappeared.

At the west end of a marshy lake called Bhwilatal, about 15 miles west from Basti, is another ruin attributed to the Tharus, and called by the same name. It is a heap of rubbish of a roundish form, and about 1,200 yards in circumference. Its elevation is considerable, and very little soil is mixed with the bricks, of which it chiefly consists. The tops of the walls of several chambers may be traced on a level with the present surface, and these probably show that the building has been a house, and not a temple as the chambers are small. On the south side of the heap, adjacent to a tank nearly obliterated, there projects from the rubbish about 2½ feet of an octagonal stone pillar, much weather-worn, and having its sides alternately wider and narrower. It is called Sivawa, and is considered an object of worship. On a small heap of rubbish between the above-mentioned tank, the great ruin, and the marshy lake, are two places of worship. One dedicated to an anonymous Muhammedan martyr (Bhuila Sahid) has no tomb, but images of potter's ware are placed under a tree to obtain his favour. The other is a Lingga called the Bhuileswar, and with the whole ruin, and a choked well is attributed to the Tharus. North from the great heap are two smaller ones quite detached, but at a small distance.

About three quarters of a mile north-east from Basti is another ruin attributed to the Tharus, and called Laknaura. It may be 300 yards in diameter, but of very little elevation, whether from having originally consisted of a number of small buildings, or from many of the bricks having been removed, I cannot say. About 1000 yards beyond this is another ruin attributed to the same people, and called Barawa. Its diameter is smaller, but the elevation is more considerable, although it contains more earth than usual. On it is a Lingga very much decayed. About two miles beyond this, north and east, is another ruin called Arel, and attributed to the Tharus. It is about 300 yards in diameter, but is higher than Laknaura. Some deep and large excavations have been made into it, probably in search of bricks.

Besides these I heard of ruins attributed to the same people at Naringau, north-east from Basti three coss.

The Kalahangsa Rajputs, who now hold the country, had built about 100 forts, many of which had gone to ruin, when Major Rutledge took possession, and destroyed the remainder. The chief seat of the tribe is said to have been in the woods about seven coss north-west from Basti. It was called Salanagar, but the Muhammedans changed its name into Munsurnagar in honour of Munsur Ali Khan, father of Suja ud Doulah, and Vazir of the empire. The place has since been entirely deserted.

MAGAHAR.—Towards the Rapti this division is low, but tolerably well cultivated. The higher parts are very much neglected, and a great deal is occupied by woods, that extend along the Ami, and Budh rivers, and at Magahar, extend to a great width, having been there enlarged by numerous plantations, that have run wild. Except in these woods, which are mostly stunted, the high land is beautiful, but very poorly cultivated. It has however numerous fine plantations, and most of the waste land is under short grass. A great part of the lake called Bakhira Jhil is in this division, but I shall describe it in the account of Bakhira. There are, however, a good many small sheets of water, the most remarkable of which is Marartal, between Bakhira and the Rapti. In the rainy season it is reckoned to contain about 2000 acres, but two-thirds of it dry up in time to admit of their being cultivated. The Kazi has two houses partly of brick. That at Magahar consists of many small brick huts scattered in disorder, partly tiled, and partly thatched, and surrounded by a ruinous brick wall, with many projecting corners and loopholes for defence. It is very slovenly, and even ruinous, as are also a pretty large mosque, that serves as a chapel, and a family burial place, both near the house. Twenty houses of two stories have mud walls, and tiled roofs; and 50 huts with similar walls are roofed in the same manner. The remainder is thatched with grass and $\frac{31}{32}$ parts have mud walls, and $\frac{1}{32}$ part walls of hurdles. Magahar contains 370 houses, and is a poor scattered place Mehedawal contains 500. Rudhauli 100. There are market places; but 19 places, which have no market, contain each about 100 houses.

At Magahar is a tomb of Kavir, whom Abul Fazil calls the unitarian; and it is difficult to say, whether he was a Mu-

hammedan or a Pagan, as I shall afterwards have occasion to explain. The present buildings were erected by Nawab Fedi Khan, who about 200 years ago was superintendent (Chuklahdar) of Gorukhpoor. They are in very good repair, but are not large, and are totally destitute of elegance. The place, where Kavir was buried, is under the charge of a Muhammedan disciple, whose ancestors have held the office ever since the funeral; while the monument of the first Hindu Mahanta, which contains his ashes and unburnt bones, is under charge of his successor. Both are objects of worship, each person taking the offerings that are made at the place, of which he has charge. About 5000 assemble annually at a fair (Mela) and there are many occasional visitants.

The Sirnet Rajas for some time resided in a fort immediately west from Magahar, and seem to have founded the town. The fort was in the usual style of a quadrangle defended by a ditch, rampart of earth, and bamboo hedge; but has contained some brick buildings, and it is said about 16 acres of ground. It is dedicated to Samardhir, but has long been totally ruinous. It is said, that the place was formerly occupied by the Tharus, and then was called Ghanasyampoor. What was shown as the situation of this place, appeared to me some natural swellings west from the Sirnets fort, nor could I trace anything like what is usually seen about the ruins attributed to the Tharus. Under a tree is a place called the Thakur-dihi, or the high place of the Lord, where offerings are still made, and the Lord is supposed to have protected Ghanasyampoor, but tradition is silent concerning his name. About the Sirnets fort, and from thence through the town to the tomb of Kavir, there are places containing brick rubbish, which, if ever the Tharus resided here, must be the remains of their town; but this rubbish may be also the fragments of buildings erected since the place was called Magahar.

Bakhira.—A small part of the long forest on the banks of the Ami is in this division. None is subject to be regularly flooded, but a fine lake occupies a considerable part of the whole. About a half however of this piece of water is in Magahar. At Bakhira it is usually called Bakhira Jhil, by which name it is best known to Europeans; but in Magahar

they call it Barachi; and the late Nawab Vazir, who used frequently to hunt on its banks, called it the Moti Jhil, or pearl of lakes. It is certainly the finest piece of fresh water that I have seen in India; but it will not bear a comparison in beauty with European lakes; for, being fed chiefly by the rains, it suffers a great diminution in the dry season; and, although a large space is always free from weeds, the water becomes very dirty and rather offensive from the immense flocks of aquatic birds by which it is covered in winter. The whole in December may be about seven miles long, and three broad; but a large part, on the north side especially, is shallow, and covered by reeds and other aquatic plants, through which a canoe can pass only in certain narrow crooked lanes as it were. Towards Bakhira however there is a very large space so deep that few weeds reach the surface, and the plantations on the bank are uncommonly fine and numerous, so that the appearance from thence is very beautiful, and is enlivened by numerous fishing canoes and vast flocks of various water fowl. The division, exclusive of the woods, is for this district tolerably cultivated; but the plantations are rather extensive, although not so overwhelming as in some parts. There is no house of brick; six houses of two stories have mud walls, and of these one is tiled; the others are thatched. There are 50 thatched huts with hurdle walls; all the others are built of mud; 15 of them are roofed with tiles: the others with grass, which indeed is the only thatch used. Bakhira contains 250 houses surrounded by a ditch, rampart, and bamboo hedge, still very inaccessible, although not in repair; no other place deserves the name of a town.

There are eight Linggas. The most celebrated is Kopeswarnath, near an old ruin, attributed by some to the Dom or Domkatars, and by others to the Tharus, who preceded that tribe of military Brahmans. The ruin is in the style of those attributed to the Tharus, being a large heap of brick rubbish, without any traces of a ditch. It is about ⅓ of a mile in diameter, and very irregular in its shape, having many projecting corners. Its S. W. quarter is very high; but in other parts it is low, and north from it broken bricks are scattered to a considerable distance on some high land, although they do not form heaps. In that direction there probably have been some small houses, while the great mass was the chief's

castle. This ruin is called Kopa. A little way east from the heap is the temple of Siva, which is evidently quite modern. It is a small cubical building, covered by a dome, in the Muhammedan style, and stands at the west end of a tank dug by that people, its longest diameter being from east to west. Except the name Kopeswar (the Lord of Kopa) there is nothing to denote a connection with the ruin, although the image may be old enough. About 200 votaries assemble on the Sivaratri; and still fewer attend the two Linggas at Bakhira. At Manggalpoor, was the residence of the Raja, whose garden was destroyed by a wild boar, as I have mentioned in the account of Basti. The Raja was naturally angry, and, seizing a spear, slew the boar. On his way from the pursuit, he met many women celebrating a festival, in which a thread is tied round the wrist, as in the marriage ceremony. The Raja joined innocently in the ceremony; but, when he returned home, his two wives thought that he had taken a third sharer in his bed, which they considered quite superfluous, and one of them, Chola devi, in her anger, broke the thread, on which, the goddess, in whose honour the thread had been tied, turned the face of the violent lady into the form of a sow's. On this, Chola devi retired to the woods, but, after some time spent in prayer, was cured by Anggira Muni. The people of Bakhira, far from admitting the petty pool of Basti to have been the object of the boar's depredations, contend that their great lake was the garden which this animal destroyed, and on its bank they show the place where Manggal built a Ghat or stair. An attempt was therefore made to bring the assembly to that place, and, about four or five years ago, some people assembled, but they have ever since failed. In the year when they were successful, there had been a severe epidemic, of the small pox, and the women who play Mahamaya, had been induced to represent the place as holy.

The Rajputs had several strongholds, now entirely ruinous. The most remarkable is at Gosiyarikhas, where Siva Singha, a younger brother of the Amer family, and grandson of the elder Jaya Singha, for some time resided. He married a daughter of a Sirnet chief, and afterwards returned to his native country, relinquishing an estate which had been given him by Madhav, his father-in-law.

Bangsi.—There are said to be 87 marshy lakes in this divi-

sion, but the largest does not exceed 400 acres, and, although they might be of the greatest advantage to agriculture, they are overwhelmed with weeds, and are disagreeable objects to view. About a tenth part of the district is flooded every rainy season, is considered useless by the natives, and in the dry season, is exceedingly dismal, being covered with withered reeds, among which are scattered small trees of the Gardenia uliginosa, a most ugly plant. A very large and stately forest of Sakhuya and other valuable timbers, occupies a great extent on the banks of the Buri Rapti, and there is a long stunted wood on the boundary of Dhuliyabhandar. The remainder of the country is planted to superfluity, but very poorly cultivated, the plantations equalling in extent ⅓ of the fields, the waste spaces between which are much more extensive than both; and are partly clear, partly covered with dismal withered long grass, and partly occupied by ugly bushes and thorns. In Bangsi, part of a brick house which belonged to a former Raja, still remains, and is occupied by the native collector. The Raja's present abode consists of several mud walled quadrangular towers, of two stories, and covered with roofs somewhat after the Italian shape. These towers are joined by huts of one story, with windows towards the interior. Before the principal gate is an area, through which the street passes. It is surrounded by mud buildings, some of them two stories high. These are accommodations for the Raja's officers and servants. There are in all 200 mud walled houses of two stories, all thatched with grass. All the remainder consists of mud walled huts, which are all thatched in the same manner, except five that are covered with tiles, but these are considered as unlucky. Bangsi is situated on both sides of the Rapti, the Raja at present occupying the northern bank, and the officers of government the southern. It is a very sorry place, although on both sides it may contain 600 houses.

The chief remains of antiquity is Kathela in the centre of the great forest, on the southern bank of the Buri Rapti. It is said to have originally been a seat of the Tharus. After which it became the chief residence of chiefs called the Kathela Rajas. They are supposed to have been Rajputs; but no one of the family remains, and they appear to have been totally exterminated by the Sirnet chief, who took the

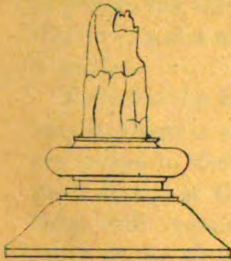
place. The Kanungoe however and Dumbar Khan, the most intelligent Hindu and Muhammedan at Bangsi, agree, that the Kathela family, having offended the goddess of their city (Kathela devi), was by her converted into stones, and that these still remain in their original forms. I presume neither had ever visited the place. It seems to have been a town with many buildings of brick, and small tanks; but no traces of fortification; and appears to have extended more than a mile each way, although I could not fully trace its outline. The brick buildings are reduced to mere heaps; but the bricks are not so much broken as in the ruins usually attributed to the Tharus, and they are quite in a different style. The ruins of Tharus usually consist of one great mass like what may be supposed to have been the remains of one great building, with some small heaps adjacent; but Kathela consists of many small heaps scattered at irregular distances over a great extent of ground. There are few stones remaining. One, which is a flag smoothed on one side, and cut into mouldings on the edges, is placed with one end in the ground, and is worshipped as Kathela Devi, the goddess who turned the inhabitants to stone. Many offerings of potter's ware are placed round; for it is supposed that no cowherd nor woodcutter could safely enter the forest without procuring her favour by such an offering. The Bhars of Sanauli are the priests, from whence perhaps it may be inferred that the Rajas of Kathela were of this tribe, which is generally allowed to have succeeded the Tharus. Near this stone, on the side of a tank, are the foundations of two small temples, the chamber in each of which has been only a few feet in diameter. In one is placed part of an image called Bhawani (goddess); but it is the head and breast of a male, so far as can be judged from what remains, similar to those which in Behar are called Vasudev, &c. The fragments worshipped in the ruin of the other temple are so small that it is impossible to say what they have been intended to represent. On a heap of brick, some way distant from thence, is lying a stone spout, which terminates in a crocodile's head, very rudely carved. It probably served to convey out the water used in washing the image that stood in the temple, on the ruins of which it now lies. All the people however with me worshipped it by

prostration, and by touching it with their foreheads. The night before they had been grievously alarmed by a tiger.

After the destruction of Kathela, the Sirnet built a large mud fort at Sanauli in the same forest. It has had a deep and wide ditch, and a strong rampart; but within there was no considerable building. The town however was large, and has contained some buildings of brick; but it has been long deserted, except by a few Bhars, who cut wood. The family seat was afterwards removed to Bangsi in the open country. They first built a house of brick on the south side of the river, and seem to me to have chosen for the situation a ruin of the Tharus, although no tradition of the circumstance remains, and the heap of rubbish on which the town stands is usually attributed to the decay of the Raja's buildings. It is only however 50 or 60 years since the house was deserted, and some walls and even chambers remain entire, and are still inhabited; but all these, as well as the town, have evidently been built on the heap of rubbish. The Rajas were terrified from the south side of the river by the ghost of a Brahman, and went to their present abode already described.

The village of Sarayat, about 10 or 11 miles north from Bangsi, stands on a heap attributed to the Tharus, but very small, and not clearly marked, the quantity of rubbish visible being trifling. At the south-end of the village is a Lingga very much decayed. Under a tree in the village are some stones. One seems to have been the base of a pillar (*Plate* 8, No. 1,) very much weather-worn; two are square flags with a hole in the centre of each; and a fourth contains a female figure (*Plate* 8, No. 2,) called Kali. She is seated, has only two arms, and seems to be playing on the musical instrument called Vina, and ought therefore to be called rather Saraswati. At the north end of the village is a Lingga, surrounded by a wall and probably modern; at least it has not suffered from the weather. Neither the Pandit of the survey, nor I could learn any tradition concerning these images, which we met with by accident.

DHULIYABHANDAR.—This was formerly a large jurisdiction, the officers of police residing at Rehera, between two estates or Tuppahs called Dhuliya and Bhandar; but these having been seized by the Raja of Gorkha, the Thanah was withdrawn to Mahadeva, where it now remains, and has under it

1.

Base of a Pillar.
(at Sarayat.)

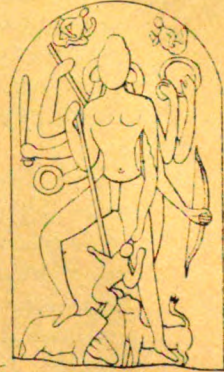
2.

Called "Kali".
(at Sarayat.)

3.

Palala.

4.

5.

N.os 5. 6. 7. 8. _ Images from Banarasiya.

6.

7.

8.

London 1838. W. H. Allen & Co. 7 Leadenhall St.
J. Netherclift Lithog.

a small territory, which, when the country was ceded by the Nawab, was but in an indifferent state, and has been since totally deserted. The only inhabitants now are the officers of police, the illegitimate family of the head of the convent at Bakhira, and a man employed by the Thanahdar to cultivate a garden.

Towards the boundary of Bangsi, on the banks of the Jemuyar, there is a long narrow forest. Except in this there are traces to show, that the whole has once been fully occupied, and that the plantations have been very moderate, for these still remain in full vigour. There are numerous small tanks at the situation of former villages, and round these are some scattered trees, but seldom such as bear fruit. All the rest of the country is covered with reeds, which when I saw it, where withered and dismal, well suited to bring to recollection the miseries of thousands, who have perished from mismanagement, or have been driven from their native abode by want of sufficient protection.

The chief object of worship is Palata Devi in the wood near the Jemuyar. It was a great favourite with the Gulmi Raja, whose spiritual guide, the chief of the convent of Atithis at Bakhira, is the priest of the goddess, and received 17 Mauzas free of rent, but these are now of no value. There are two small temples, but quite modern, having been built by the predecessor of the present priest, I presume at the Raja's expense. They are in the Muhammedan style, that consist of a cubical chamber surmounted by a dome. They are small buildings, but stand on the ruins of a large temple, the foundations of which in some places are still a few feet high, and a fragment of a stone pillar, and the images still remain; for there is no doubt, that the images are very ancient. In the one temple a large angular stone projects from the floor, and is said to be a Lingga, nor has it a greater resemblance to anything else; but there are no traces of the female part, which however, may be buried in the ruin under the temple, as the projecting part is very short. In the other modern building is the image called Palata, exceedingly worn by the lapse of ages, and the features totally obliterated (*Pl.* 8, No. 3.) It represents the goddess destroying a man, who has sprung from the truncated neck of a buffalo, so common in the monuments of the sect of Buddha in Behar.

Before the two modern temples, at the limits of the ancient building is a tree, under which are portions of two broken Linggas. At each Dasahara there is an assembly, but that in autumn is trifling, while in spring the multitude is very great, and remains nine days: 3 or 400 shopkeepers or hucksters attend, and I have heard the number of votaries reckoned at 50,000. Many buffalos, rams and goats are offered.

About four or five miles east from Mahadeva I saw two elevations somewhat like the ruins attributed to the Tharus, but containing fewer bricks. They were called Trupasandihi and Trupasandihika Jhunga, the latter word signifying a grove, for the ruin is covered with trees. On this latter is a small conical heap of bricks, which has evidently been a temple, and on its ruin have been placed two Linggas, which it probably once contained. On Trupasandihi, or the high place of the worshipper of three gods, there are in fact three Linggas placed under a tree. They are exceedingly weather-worn, and one of them, on the side of the phallus, has a human face. Besides these there are many fragments. Among them, I thought I could trace the Chakra and head of the mace with two of the hands of the image, which in Behar is usually called Vasudev, &c.

There are the ruins of some petty forts, erected by various Rajas and thieves, especially one at Musharoya, about two miles from Mahadeva, which was a strong hold of the Bangjara tribe, when these predatory merchants were in the habit of plundering Bangsi, Satasi, and Parraona.

LOTAN.—A considerable portion of this division is liable to be annually flooded, and is very dismal being very poorly cultivated, and the waste produces only long harsh grass, which early in the dry season is withered. Forests occupy a very large proportion, especially in the south and east parts of the division, where there is one of very great extent, that contains some large timber. A small one towards the northwest on the Telar is much stunted. The clear part of the division about Lotan and Kharati, has once been fully occupied; but many people have lately deserted it, and the plantations are equal to almost a third of the fields that are now cultivated. No house is built of brick nor tiled, but there are 10 mud-walled houses of two stories. Of the huts 15 parts have walls of mud, and one part walls of hurdles; but these

are always plastered with clay on one side, and sometimes on both. All the thatch is grass. Lotan, where one set of the police officers resides, contains only 70 huts, very poor. Kharati, where the other set resides, contains 150, several of two stories, and the whole rather more comfortable. No other place deserves the name of a town.

There are three petty forts built by different Rajput chiefs contending for power, and now entirely ruinous. And the only remain of antiquity worth notice is at Banarasiya in the north-east corner of the division surrounded by forests. I could not conveniently see it; but sent some people to draw what was remarkable; and from the plan it will appear, that the fort is but modern, being a small quadrangle with round bastions at the corners; (*Plate* 8, No. 4,) but there are in the place some broken images very much weather-worn. Among them may be evidently distinguished a Nrisingha, a Buddha, and probably one of those which in Behar are called Vasudev, &c. (*Plate* 8, Nos. 5, 6, 7 & 8.)

PALI.—This is a jurisdiction of a reasonable size, and compact form. Pali, where the officers of police reside was formerly a town which had a fort and castle, belonging to the Chauhan chief of Butaul and Palpa; but this has gone to ruin, and the town in the rainy season is deserted by all except the police officers, who retire to sheds erected on wooden posts to protect them from tigers. In the fair weather 10 or 12 traders come to deal with the people from the mountains, and occupy mud-walled huts. The other habitations, chiefly in villages belonging to the Tharus, are thatched huts with walls made of small stakes of interwoven bamboos, or of reed hurdles, but not plastered. The huts of the Tharus have straight ridges, and in general are much wider, and longer than those of the other natives; but one hut usually serves for the whole residence of a family, which in the southern parts of the district would have three or four huts round a yard. On one side of the hut is usually a garden neatly fenced, and containing tobacco, mustard and a few plantain trees. The Tharus keep, cows, buffaloes, sheep, goats, fowls and pigeons, and this live stock occupies an open end of their hut, separated from the dwelling apartments by an hurdle wall. All the northern boundary of the division is covered by a stately forest containing many Sakhuya trees,

and on the bank of the Tinay this forest extends far south. There is also a thick forest in the southern part of the division between the Payas and Rohini. The remainder would appear to have been once cultivated; but the large space between the Danda and Rohini would seem to have been deserted before the English took possession, and this in consequence of wars between the Chauhans and Sirnets, which raged about 20 years ago. This part of the country is very dismal, being overgrown with withered reeds on the lower grounds, among which are many small tanks with a few scattered trees on their banks. The higher parts are covered with clumps of young Sakhuya. The plantations of fruit trees have been entirely destroyed. The remainder of the country looks better, although there is very little cultivation; but it has been lately deserted, and the plantations remain, nor have the reeds acquired the same ascendancy, so that many fields are still clear pasture.

Near one of the lately deserted villages I observed a small temple of Siva, still having the appearance of being perfectly recent; and at Pali, Mahadatta Sen of Palpa commenced a temple, but it was never finished, nor any image placed in it. Every village had a low deity, usually Samardhir, whose priest was a cobbler, and some of these are still worshipped. Each had also its place for appeasing a ghost of the sacred order, chiefly Tulasi Sukla. Besides the fortified house at Pali, the Chauhans had several petty forts, built by their servants or officers, but now entirely ruined, and never of any consequence.

Nichlaul or Nachlawali—Is a jurisdiction of good size. The Kazi of Gorukhpoor held the southern part of this division as usual by hereditary right; and, as the person who held the northern part chose to adhere to the Raja of Gorkha when that prince seized on a part of the country, the remainder has been annexed to Gorukhpoor.

A large island in the Gandaki is subject to be flooded, and is overrun with reeds and tamarisks. Much of the land towards the north is very low, and during the rainy season is subject to be flooded partly by the rain water lying long, and partly by the swelling of the torrents. This is very fit for rice, but it is thinly inhabited, and looks very dismal, being covered with long withered grass, among which in some

places are scattered ugly trees: on the higher parts however are a good many plantations. Near the hills of the north the country is covered with fine forests, adjoining to which, on the bank of the great Gandaki, is a thin wood consisting almost entirely of Sisau. South from thence, and adjacent to Nichlaul on the east, is a very large forest, chiefly however stunted, and containing many mimosas, especially the Catechu. Opposite to this, on the west of Nichlaul, but at some distance, is another forest, in which there is some Sakhuya trees, but chiefly small. The country south from these forests and Nichlaul is clear, and planted with fruit trees sufficient to serve 10 times the present inhabitants, although these are much more numerous than they were of late, many having retired from the northern parts of the division, in consequence of the disputes with the Raja of Gorkha.

There are two houses of brick belonging to the Kanungoe, and eight houses with mud walls have two stories, three of them are tiled, and five thatched. Four mud walled huts are covered with tiles; all the other huts are thatched with grass, ten parts having mud walls, and six parts those of hurdles. Among the latter are some Tharu villages; the others belong chiefly to new settlers, who have not yet determined on a fixed residence, but are ready to move if any increase of rent is demanded. Nichlaul or Nichlawali is a very sorry place, although it contains 200 huts. It formerly had much trade in grain, but that has failed, in consequence of the country to the north having been deserted. Near it the Rajas of Palpa or Butaul had a mud fort and castle, a very sorry work entirely ruined. Maharajgunj, the only other place that deserves the name of a town, contains 125 huts.

The chief object of Muhammedan worship is the monument of Sunduli Mudar Shah. It is situated on a hill which overhangs the large Gandaki, and the building is very petty. The festival lasts for some days before the Sivaratri, and about 2000 usually attend, but several of these are Hindus. They offer copper money and handkerchiefs, which the keeper takes. Last year the people of the Gorkha Raja began to collect, and allowed the keeper nothing; but some police officers from Nichlaul arriving, the mountaineers desisted, although they did not restore what they had taken. The keeper says that he is the 18th in descent from the per-

son who first held the office, and, if this saint was the person named Mudar, who flourished in the time when Timur invaded India, this would give 23 years for each generation, which is a reasonable allowance, where people marry so early as is usual in India; but that saint is generally allowed to be buried at Mukunpoor, and is called Budiuddin, while the keeper calls his saint Sunduli, and alleges that he is buried here. This however is probably a mere pretence, for he admits that his saint first came to Mukunpoor from Lahus, his native place, and then came here by the way of Butaul. On his arrival he dug a pit, in which he as usual fasted 40 days and nights; after which he died.

Madana Sen, the Tharu prince, is said to have had a house at Kanaha on the east side of the Gandaki, some way above Sivapoor, and in the country now seized by Gorkha, so that I could not examine the place. His wife called Rani Karnawati is said to have lived on bad terms with him, and chose for her residence the top of Maddar hill. There is there indeed the ruin of a small brick building like a small fort; but it could never have been intended for the residence of either a lady of rank or garrison, as there is no water near. It is probable that the chief residences of Madana were at the town of Madanpoor in the Gajpoor district, and Hetampoor in Belawa: but it is very likely that he might have had a house at Kanaha, to which he might retire in the favourable season, to enjoy the most magnificent scenery of that vicinity: and it is possible that his lady may have erected on Maddar hill a place, from which she might occasionally enjoy one of the most magnificent prospects that nature affords. As besides the tremendous peaks of Emodus on one hand, and the immense Gangetic plain on the other, this hill overhangs all the deep recesses and shaggy mountains through which the different branches of the Gandaki force a way.

Several other places in this division are shown as the ruins of forts, which belonged to Madana and Karnawati, but they are very inconsiderable, and at two of them, Sivapoor and Bahuyar, small forts of brick were lately built by Hathi Ray, a slave of the Palpa Raja, who having rebelled, held the country for some time. Around the modern fort Sivapoor, however, are lying many stones, which are said to have belonged to the building of Karnawati. In the account of Par-

raona I have mentioned the temple said to have belonged to this prince's spiritual guide, who, according to the tradition in both places, was a low fellow of the Musahar tribe named Rasu (amorous). As might be expected however from his name, if well applied, he was a great favourite of the goddess, who used frequently to appear to him. The Raja being exceedingly desirous of obtaining a view of her heavenly beauties persuaded the priest, while in his presence, to repeat the forms of prayer, which procured him the transporting sight. As he repeated the awful words her hand appeared issuing from his head, and he fell dead. The Raja was seized with madness, and soon killed himself, and the kingdom departed from his family and tribe, and was seized by the Bhar named Varaha Deva, who probably resided occasionally at Kathela in Bangsi, and Dhuriyapar in Gopalpoor; but the principal residence of this dynasty would seem to have been Garsamaran. His tribe, when driven from thence, would appear to have resided near Ramnagar in the district of Saran, until the Chauhan Rajputs seized on their country, part of which they still hold. These Chauhans and their servants, and the Sirnets with whom they waged frequent wars, have built several forts, all now in ruins, and unworthy of notice.

CHAPTER IV.

POPULATION, DISTINCTION OF CLASSES, MANNERS, DISEASES, COSTUME, ETC.

The estimate of the number of houses in the towns of Gorukhpoor and Nawabgunj has been taken from an account given by the officers of police, and does not appear to me liable to any considerable error. I have from thence calculated the number of people in the same manner, as from the number of people in Shahabad I calculated the number of families. In the other divisions my native assistants with a good deal of pains took an account of the number of traders and artists, which has been implicitly followed. In order to form an estimate of the other classes of society, as in the districts hitherto surveyed, I consulted many intelligent persons concerning the quantity of field that one ploughman usually labours. This however I must observe is generally very small, and is perhaps underrated, in which case the number of cultivators and gentry will be less than I have stated; but I have no means of calculating how far this may be the case. The number of ploughmen having been ascertained, I have endeavoured to allot to each class the proportion of ploughs which its members hold, and thus I procured an estimate of the number of the lower tribes of cultivators. The higher tribes or gentry I have calculated from the proportion which they are said to bear to the cultivators. Having thus procured the number of able bodied men, I have as formerly made an allowance for the females and infirm or young males. Near the Ghaghra, where the climate is uncommonly healthy, I have allowed 100 able bodied men for 425 people, in the middle parts of the district, as about Gorukhpoor, I have allowed 100 for 450, and towards the hills, where the country is more unhealthy, I have allowed 100 men only in 475 persons. Here, as in Behar and Shahabad, the people are divided into four classes.

The 1st, called Ashraf and Bhalamanush, forms a kind of gentry, who in this district far exceed any reasonable bounds,

so that by far the greater part are in a miserable state of ignorance, and many in great indigence. It is only some among them called Durbaris that can face the judge, collector, or such great personages. A great many called Gharaiyas never, if possible, venture into such presence, and when they do, seldom find utterance ; but if they are able to speak at all, it is in a roar like a bull's, they being mere clowns. None of them will labour for hire; but almost all have farms, and by far the greater part do every kind of labour in their own fields, except reaping and holding the plough, both of which are considered as so highly discreditable that no Brahman nor scribe can here be induced to perform them, and very few even of the Muhammedan gentry or Rajputs will condescend to this degradation; by far the greater part even of these would rather perish of hunger. About 800 families are engaged in commerce, and 100 as artificers or artists; but they are allowed by all to be Ashraf.

Until the English Government these higher orders possessed almost the whole lands in property, and the whole leases; for neither the artists, traders, nor other low tribes were permitted to cultivate the earth, except as servants. It seems to have been more owing to this than to the form of government, although that was far from good, that the country became depopulated, the Company's provinces in the neighbourhood affording abundance of lands for such of the low tribes as chose to emigrate. The removal of this privilege, since the establishment of the Company's government, has given very great disgust to the higher ranks, who are a good deal discontented; but it attracted a good many low people from the countries remaining to the Nawab, until this prince has granted them similar indulgences. The Muhammedan gentry consists as usual of Saiuds or descendants of the prophet, of Sheykhs or persons of Arabian extraction, of Moguls, of Pathans, and of persons dedicated to religion (Fukirs) or poetry (Bhats). Even in the short time, however, that has intervened since the English took possession, the insolent pride of Hindu caste has acquired such an ascendancy, that all the Pathans, Bhats, and Fukirs, who hold the plough, which is the case with many of these orders, have been excluded from the rank of Ashraf; but I have thought, that such an unjust distinction would only lead to

confusion; as no one dares exclude from the rank of gentry the Rajputs or other Hindus of rank, who have wisely undertaken this valuable kind of industry. The Hindu Ashraf or gentry consists of Brahmans and Rajputs, both exceedingly numerous, and the former very proud, of Bhats or parasitical poets, of musicians (kathaks), of Khatris and Agarwalas engaged in commerce, and of Kayasthas or scribes. The numbers of the Khatris and Agarwalas are very inconsiderable, and although they are merchants, they are not included among mercantile tribes. There are besides a good many (in all, including the Agarwalas and Khatris, 800 houses), Brahmans, Muhammedans, Rajputs, and Kayasthas, who although in fact traders, are included among the gentry, and have in the Appendix been admitted as such, so that on this account the actual number of traders is 800 houses more than mentioned in this document, and on another account, as will be afterwards mentioned, it requires a still greater augmentation.

The low mercantile tribes which form the second class are here called Baniya or Bukal, and very often both words are united in one term. A good many have now small farms, which they cultivate with their own hands in the rainy season, when commerce is nearly at a stand. This class should in fact be augmented by 800 families, who, although in reality traders, are by all included among the Ashraf or gentry; and it would also require to be augmented by 1080 families of Telis, who carry on trade; but they have also oil-mills, which their women manage, so that each of these families trades, and at the same time manufactures. I could not mention them in both classes, without increasing the population; and, as the proper duty of the tribe is to express oil, I have included the whole among manufacturers. About 220 other families of manufacturing tribes and an equal number of agricultural castes, are engaged in commerce; but as this is their chief employment, I have included them among the traders, while I have included among the artists still more of the mercantile tribes, who live by manufacturing, especially the Kalwars, who distil, and who amount to about 760 houses.

Although the third class composed of artists, is in many parts considered as abundantly distinct from the others,

there is no word appropriated to express it, and in some parts both traders and artists are included in the common name Alhurf. The term Pauniya is applied only with propriety to express the blacksmith, carpenter, barber, washerman, and shoemaker, attached to the manorial establishment. Many of them have small farms, which one person of the family cultivates, while another works at his trade. Their women are hired to weed and reap.

The duty of ploughing and reaping, which is that of the fourth class, is considered as exceedingly mean, and so discreditable, that the term Chasa is rejected by them, and they are called Grihasthas or inhabitants, and Khetihars or men of the field. Since they have been permitted to farm lands, many, who were not involved in debt, refuse to work for the higher classes, who in some parts, being exceedingly numerous, have been under the necessity of procuring labourers from the countries which are more populous; and I heard it alleged, that the number, which comes from the Nawab's country during the rainy season is very great, and may amount to 54,000. These have not been included in the population, any more than the soldiers of the regular army, and their followers. Parraona is the only part of the district that has a superabundance of labourers, and, although there is still much land waste in that division, many people go from thence to Munsurgunj for service.

On these grounds I have taken the number of inhabitants at 1,989,314 (see Appendix), and, by following the same plan as in Shahabad, I find, that these will occupy 277,099 houses. It must be observed, that the number of houses, belonging to each class, does not give a fair view of the number of persons respectively belonging to each. The families of the gentry are considerably larger, and those of the artificers and traders considerably smaller, than the average proportion. The population, which I have assigned, amounts to 269 persons to the square mile, which in Europe would be considered as a great number; but it is very low, where almost the whole soil is capable of giving at least one crop of grain in the year, and where the people live almost entirely on grain. The whole field now actually cultivated has been estimated at 2417 square miles, which will give rather

more than $2\frac{1}{3}$ Calcutta bigahs for each person, nearly the same proportion as in Behar, because in the $2\frac{1}{2}$ allotted there for each person, there is included the ground occupied by houses and plantations, while here the $2\frac{1}{3}$ bigahs are all field. The number of men said to be absent in the regular army amounts to 248, which can produce little or no effect on a population so considerable.

A great proportion of the Rajputs, military Brahmans, and Pathans, is willing to serve as irregulars or messengers, and until of late were at all times ready to draw their swords in the disputes of their chiefs, both with each other and with their government; and a good many of them had predatory habits. The latter have been considerably repressed, nor does any robber of consequence now lurk in the country. Neither does any chief presume now to resist the civil authority; but they are still apt to decide disputed boundaries by the sword, and several engagements have of late taken place, although such violence is much less frequent, and is carried to a much smaller extent than it was in the Nawab's government; with which it did not seem to be an object to preserve the peace. So far as I can learn, it was not usual for the government to interfere, either to prevent or to punish the feuds between the chiefs, unless one of the parties paid for assistance, in which case it was given, more however in the manner of an ally than in that of the sovereign of both parties. The chiefs, and most natives of rank, of the military tribes at least, seem very much to regret this change in the administration of affairs; and it seems in fact to have been much less fatal to their interests, than the endless litigations, in which they are now involved, and in which they vent their mutual heart-burnings and ancient feuds. The whole number of men born in this district, who are ready and able to enter into at least irregular military, or predatory service, may amount to 29,000, of whom 2778 are employed here, and 833 in other districts, while not above 260 strangers have found their way here from other places. This no doubt somewhat reduces the population. The greater part of these are provided with sword and target, and a good many with matchlocks, but few go abroad armed. The number of penmen born here employed in other districts (330) rather ex-

ceeds those strangers employed here (233); but in so trifling a number as to produce little or no effect on the population, although their remittances may be of considerable value.

The manners of the women in general are very strict, and the men are jealous. People of severity complain that since the English government there is more laxity among the women than formerly, the husbands being afraid of making such severe examples, in cases of frailty, as were formerly usual; for with whatever was done the Nawab's government did not interfere. At Gorukhpoor the example of the refugees from the hills who have fled to escape the violence of the Raja of Gorkha, seems to have had a still greater effect, than the interference of our courts; and a good deal of intriguing prevails, especially among the women of the mercantile tribes. Many of the mountain beauties have a good deal of the Chinese or Tartar countenance, which seems to me to be admired by the natives more than their own regular features, a taste probably introduced by the Moguls, and spread, by the usual imitation of the great, even among their Hindu subjects.

The Rajputs here being of high birth, are often courted as sons in law by those in the east, and receive large dowers with their wives. As they scorn to give their daughters in return, they find it difficult to procure husbands of a suitable rank; and I am credibly informed, that several of the higher families were in the habit of putting their female children to death, when born. As our courts would be apt to give them much trouble, should such a practice come to light, it is said, that they have of late desisted from this cruel practice; but in its stead have adopted one, if possible, still more barbarous. It is alleged, that they give the infants too little milk, and thus occasion them to linger, and perish from want of adequate nourishment. It is scarcely possible to conceive,* that a mother could be induced to join in a practice so repugnant to the ordinary feelings of humanity; but it must be recollected, that they are brought up with the highest notions of pride, to the stern dictates of which they often sacrifice themselves on the burning pile. The great proportion of Hindus of high rank occasions many young widows, who cannot marry a

* The History of Rajpootana unfortunately proves it to be true.—[Ed.]

second time, and this is no doubt some check on population. The young widows of the low ranks usually become concubines.

Inoculation for the small pox has as yet made less progress than in Bengal; and in some places is scarcely known; but in general it seems to be rather on the increase, and it is said, would be more common, were it not for the difficulty of procuring operators, all of whom come from the east. It is evident, that the Muhammedan faith has here had a tendency to check the practice, as in the divisions, where this religion has become most prevalent, the practice has been the least extended.* About the capital the surgeon has vaccinated a few, although the people there entirely reject inoculation for the small pox, nor do they seem at all aware of the advantages of vaccination, nor has any native begun to operate with this disease. Fevers seem upon the whole to be more and more numerous in proportion to the vicinity of the hills, and in the three northern divisions the people have a sallow colour and weak appearance. The whole rainy season is there very unhealthy, but the autumnnal epidemic is in all places the most severe, and the vernal, attacks mostly children. It is said, that of late the fevers have more frequently than formerly been accompanied by visceral obstructions. Except in towns, where there are physicians, the only remedy used in fevers is an abstinence, during which the patient is allowed only a very little water. Few modes of treatment seem more successful. The ordinary fevers are of the remitting form, and last from two to ten days. Some of a slight nature are called cold and hot, Sardigarmi, and require little or no attention. The people allege, that they are also liable to slight febrile attacks, if they omit for some days to eat before 10 o'clock in the forenoon, especially near the equinoxes. This kind of complaint is called Kharai, and is accompanied by headach and bleeding at the nose.

Fluxes are more common in spring than in autumn, and are pretty frequent, although far from fatal. Like the vernal fevers they are most common among children. Cholera (Pangchak) is not common. The febrile complaint called

* Owing to the extreme length to which the doctrine of predestination is carried by the Moslems—[Ed.]

Nakra very seldom occurs, and in most parts is said to have been totally unknown until of late. The fever accompanied by tumefaction of the maxillary glands in many parts of the district is not known; but in Sanichara, and some other places, I heard of it; and it was said to prevail chiefly in the end of October and beginning of November, and to be attended with little danger.

Both kinds of leprosy are pretty common, and the Kor, or Korhi, that in which the joints fall off, is said to be on the increase. The people here do not separate the diseased from their families, and some of them continue to live with their wives, and beget children, who seldom escape the disease. Although in general they are not exposed to want, a good many of them, in order to expiate the sin, to which their disease is supposed to owe its origin, put themselves to a voluntary death. Some go to Ayodha, and more to Prayag, and throw themselves into the holy stream; while others to whom a distant journey would be inconvenient, throw themselves into a pit filled with fire. The white leprosy would not appear to be hereditary, nor is it beheld with such abhorrence as the Kor, so that the affected, seldom, if ever, destroy themselves, although it is considered as a mark of divine anger. It is commonly called Sapheda and Charakh.

The swellings, which affect the legs (Filpas) &c. are not common; but the swelling on the throat, (Ghegh) affects many. In some divisions this disease seldom or never occurs, in others it is very common, but it is not always, that it prevails in similar situations; for instance in Munsurgunj and Gorukhpoor the swelling in the throat is more common than in any place in the district; but is very rare in Bhewopar on the opposite bank of the Rapti. It must also be observed, that in Bhagulpoor and Gopalpoor, where the swelling in the legs, &c. is most prevalent, the swelling of the throat is not at all common. On the banks of the Gandaki the latter disease is said to affect crows, kites and dogs as well as the human species, but I noticed no instances of the kind. In some places it was said, that the swelling has disappeared, after the patient had removed from a place subject to the disease, to one exempt from it. Although, upon the whole there seems reason to think, that the remote cause of this disease has some connection with water springing in alpine

regions; yet in Khamariya I found it attributed to drinking the water of a lake at Hyderabad, which seems to have little or no connection with any stream coming from the northern mountains.

Rheumatism is rare, nor did I hear of any that had the species of lameness called Kungj, which is frequent in Behar, Patna, and Shahabad. On the bank of the larger Gandaki, however, there is a peculiar disease called Baudh, which seems somewhat analogous. The persons who are affected, are incapable of speaking distinctly, or of working hard; but, although in all respects rather imbecile, they are not destitute of understanding like the idiots of the alps. Unfortunately they by no means enjoy the same favour, and many of them are common beggars. Some are born in this state, others are seized when of an adult age. About 400 persons in all are said to be in this wretched condition, nor when once affected, do they ever recover. An ascites (dropsy), seems to be endemic in five or six Mauzas, north from Parraona about 16 miles. The belly is much distended, and the legs and arms much emaciated. The progress of the disease is however very slow, requiring many years to kill the patients, none of whom have been known to recover. I did not see any affected person, but from the symptoms above mentioned, as detailed by the natives, I presume, that the disease is of the encysted kind.

Condition and manner of living of the people.—Provisions being cheaper here than in Shahabad, and the expenditure of money being nearly the same, the people live more plentifully than in that district. There are many chiefs of very high birth, and extensive possessions; but no one lives in the splendour becoming such a situation. During the Muhammedan government their undisciplined but gallant followers were always able to secure them in a considerable share of power and respectability; so that, although the rude state of the arts deprived them of the means of suitable splendour, and their religious creed deprived them of the means of showing the convivial hospitality of our ancient barons, yet they had numerous attendants, both in the battle and chace, their usual occupations in the day, and a great variety of beauties to enliven their nights. The power of European discipline having rendered all resistance to law

hopeless, its stern decrees having taken place, and the high born chief, in custody perhaps of two or three bailiffs, whom he must pay for common civility, is obliged to hang on in daily attendance at the office of a collector of revenue, and to treat a beardless penman as his superior in rank. Their kindred still hang round the chiefs with some degree of regard; but that consolation will soon cease; and so far as they think prudent, they naturally shun all intercourse with Europeans, and still more so with the native officers of government; their chief consolation is in the sports, which their wastes afford, and their chief expenditure is in hawks, and the equipage necessary for the chace. There is not therefore one native in the district that lives in the splendour becoming a person of rank. Their houses at the best had been mean; and I did not see one that was not ruinous.

The custom of going abroad armed, which was lately general among the numerous gentry even of the sacred order, has in a great measure been abandoned; and many of them have disposed of their arms, thinking them unnecessary for their domestic security; for the police in that essential point has been much improved since the establishment of the Company's government. The people are naturally honest, and the thieves and robbers, who formerly infested the district, were men, who openly professed the employment, and supported themselves by a military force, which was adequate to resist irregulars in the forests of this district, but instantly gave way to European discipline. The chief perpetrators of enormities had been the traders called Bangjaras,* who went in large caravans, armed, as they pretended, for their defence; but ready to plunder, wherever they could do it with safety. They still frequent the district, but merely as traders; nor has there from their part, I believe, been the least reason for complaint, since the people were under the protection of the well known, and highly respected bayonet. Many Rajputs here make money by marrying the daughters of lower men from the east; still, however, the expense of marriage is intolerable, and is a principal source of the debt, in which a great proportion of the people is involved. The expense of funerals and of priests is trifling, when compared with that in Bengal. All ranks bury what money they may have, but few have any capital. It is not supposed, that

* Brinjaries or dealers in grain, &c. probably.—[Ed.]

much is lost by being buried, as the people are careful to divulge the secret in time.

In the topography of the divisions I have given an account of the buildings, so far as they affect the appearance of the country. The observations, made in the accounts of Behar and Shahabad on the different kinds of houses, are in general applicable to this district. The castles built of mud, or even of brick, make in this district no external show, as they are always surrounded by thickets of bamboos, which conceal them from view. In several parts a good many tiled roofs have been introduced, both in huts and houses of two stories, and they are much neater than those of Behar or Bengal; but in some places prejudices continue against employing them, and they are considered as unlucky. The thatched roofs as in the south of Shahabad are execrably rude, and unseemly, although straw or stubble is very seldom used, and grass no doubt, with care, makes a neater and better roof than either. The huts have seldom any wooden frame for the roof, which is supported by a beam of wood going from one gable end to the other, and by the top of the walls, which seldom exceed four feet in height. Each hut, as usual in India, consists of one apartment, and those, who can afford more accommodation, build more huts in proportion to their means.

Although in the midst of forests, very few of the huts have wooden doors, and still fewer have any aperture in the form of a window. Very few of the mud walls except in the town of Gorukhpoor, are white-washed or painted, and their outside is in general very slovenly; but as usual in India, so far as I could judge by peeping through the open doors, the insides are much cleaner than might be expected from the external appearance. There are here none of the huts in form of bee-hives. The houses in villages here are much huddled together, and make no show at a distance, being usually buried in plantations; but they are not scattered through these as in Bengal, so that fires are very destructive. The furniture is fully more defective than in Behar.

The petticoat (Lahangga) is fully as much in use as in Behar, but the bodice (Korta) and veil (Urani) are confined to a few young women of the Muhammedan faith, or Rajput tribe; nor do any Hindus, but the women of the Khatri and

Agarwala tribes, adopt the drawers of the Muhammedans; and even these, it is alleged, do so only, when they go on private intrigues, to which they are said to be much addicted. The gown (Peshwaz) is confined to less than 200 of the chief Muhammedan families, and to the dancing girls. The Hindu women, who wear a petticoat, use also a wrapper, which covers their head and body, but does not entirely conceal the face; at least all young women contrived to shew theirs as they pass. Besides the Lahangga and Sari in cold weather, they use often a mantle or Chadar. The petticoat is always coloured, and most commonly checkered. Those most valuable are of pure silk and cotton mixed, from Maldeh, and usually here called Atlas. Then come those made of Tasar silk and cotton, which are called Ganggam or Ginggam, and are made in the country between the Ganges and Ghaghra. The coarsest petticoats are made of cotton entirely in the same part of the country, and have various hard names according to their pattern. The longer wrapper (Dhoti) worn with the petticoat is always of cotton, and is of various fineness according to the rank of the wearer. The finer ones are always bleached, and both fine and coarse are sometimes dyed, especially at marriages. Widows of pure birth are not allowed to use the petticoat, but the widows of low castes, who are in the expectation of becoming concubines, continue to use this indulgence. Those, who use the coarse petticoat, are in better circumstances than those who use the wrapper alone; so that it seems to have been chiefly the want of means, that has at all preserved the original Hindu dress among the women. The female wrapper, when of full size, is here called Dhoti, which term in Behar and Bengal is confined to the male dress, while the female wrapper of full size is there called Sari. Many, however, cannot afford this, and must use not only a small wrapper (Kiluya), but that composed of several pieces sewed together, which is an abomination with the Hindus, so that every woman of rank, when she eats, cooks, or prays, must lay aside her petticoat, and retain only the wrapper made without the use of scissors or needle.

The men also have chiefly preserved the Hindu dress from want of means to purchase the Muhammedan; for every one, who can possibly procure a full dress (Jora), either by beg-

ging or borrowing, uses it at marriages. The number, who can afford to appear in this dress at visits of ceremony (Durbar), is however very small, and very few can afford shalls. Many in visits adopt the more common Muhammedan dress (Hindustani Posh), but in ordinary almost every one uses the old Hindu fashion of a wrapper, and turban, with a small mantle for the cold season. Even those Hindus, who cannot afford the wrapper of a full size, use the turban, although many have it of a pitiful size, but it must be observed, that some old tribes, such as the Musahar, do not use this part of dress, which here however is more general than in any part that I have seen, even the Pandits and men dedicated to religion using it; while in most parts they either go bare headed or use a cap with flaps coming over their ears, such as we see in the old sculptures of Egyptian priests. The turban I have no doubt is of Persian origin. The Moslems at home use a small conical cap, and some of the scribes, who have studied Persian, are beginning to imitate them in this economy. In the cold season all who can afford it have quilts, which they wrap round them, night and day, when cold. Those who are easy, use quilts made of chints (Rajai), or of coloured cotton cloth (Lehap). Those who are poorer, use quilts, which, when new, are white (Sirak or Saphedi), but are never washed. Those who cannot procure such quilts, use those made of rags (Gudri); but such are chiefly used by the low castes, who also use blankets; while those of pure birth, who cannot procure Rajais or Saphedis use only a single (Chadar) or double sheet (Gelap, Khol, or Dohar). They use blankets for bedding, but never as a covering. The low castes, who use the blanket, always have a sheet (Chadar) under it. In cold weather the women use little more covering than in the hot; the greater quantity of fat, with which women are provided, rendering them less susceptible of cold than men are. On the whole the clothing here is fully as coarse, and rather more scanty than in Behar and Shahabad; but I do not think that it is quite so dirty, a great many having their linen bleached, and cleaned by the washerman.

Most of the men and of the Muhammedan women wear shoes, but very few of the low Hindu women use sandals. This however seems to be more from economy than aversion, as the women of the chief families, who can afford to live idle

and in luxury, use the gaudy slippers made after the Patna fashion. Ornaments of lack are confined to the women of the tribes called Chamar Dom and Dosads, in the very dregs of impurity. The numerous tribe of Ahir use the base metals, brass bell metal and tin, almost alone. The other tribes wear almost all ornaments of glass, with some of the metals according to their rank and circumstances. Some tribes of the Rajputs never use the base metals, although even the Brahmans use them on their legs and arms. By far the greater part of all the women have at least a ring of gold in their nose, and perhaps 200 families have their women fully bedecked with the precious metals, which are more plentifully applied to female ornament than in Shahabad. Four or five families have coral, pearls and diamonds. The ornaments of glass are however considered as the proper ones belonging to women of rank, while in the prime of youth and beauty, and here it is these alone that widows are compelled to lay aside.

Men very seldom anoint themselves with oil, except at marriages, and as a remedy for disease. The women more or less frequently, according to their station, anoint their bodies and heads with oil, and paint their foreheads with red lead. This even by young beauties is seldom done oftener than twice a week, and by old ladies it is practised seldomer. A bit of coloured glass is pasted between the eyes at the same time, and is not disturbed by washing until the next day of ornament. Their heads of course cannot be washed in the intervals. The washing of their forehead at any time is considered as very disgraceful, and the alleging such an action is considered as a term of great reproach; for widows of rank are not allowed to paint, and the washing off the paint is considered as an expression of a desire for the husband's death. Virgins are not allowed to paint; it would be considered as too glaring a declaration of their desire to attract the notice of men.

The eyes of bridegrooms are blackened, but no other males are guilty of this affectation after the age of infancy; for the women, when they blacken their own eyes, which is only done occasionally, apply some to those of their children. Most of the women are more or less tattooed, although the operation is by no means considered indispensable; and men of rank have no scruples of drinking from the hand of a nymph whose

skin is without spot. The lower women, however, take a great deal of pains in adorning their skins with various figures. The ringworm is every where troublesome to a number of the men, and in some places seizes on a great proportion of them; but it seldom affects women. It generally goes away, or is much alleviated in the rainy season. Psora is pretty common, especially in winter, but on the whole is less frequent than towards the east.

It is usual among the natives of India to cover themselves day and night with the same clothing. At night the turban, and such ornaments as would incommode, are laid aside, but no other material change takes place. The bedding therefore consists of what is intended to enable them to lie easily. Those who have the best kind of bedsteads, made by a carpenter, and all the parts of which have received some degree of polish, have usually a bad mattrass, and some pillows covered with a sheet. Curtains are never used by the natives of this district, although several Bengalese have shown them the example. All the other bedsteads are of the rude kind called Khatiyas, which are mere rude sticks tied together, with a bottom of coarse ropes interwoven to support the bedding. This in some cases consists of a blanket and sheet, or of a carpet or rug. In other cases the bedding is a coarse mat, or some straw. Many however cannot afford these luxuries, and sleep on the ground, spreading on this a coarse mat of Kusa Ater or Gongdari, under which in winter is spread some straw. Religious mendicants are not allowed the use of bedsteads, but use good bedding, that is blankets or carpets; and many old infirm persons prefer the ground, as giving them less trouble.

The quantity of butcher's meat and poultry that is consumed here is exceedingly small. In the capital two or three shops sell execrable goats' meat and mutton; but it is used only by Muhammedans and persons of low birth; and the Hindu gentry, when they want to eat meat, kill it themselves, or offer it in sacrifice, or kill game; but a great many altogether reject animal food. There are no ducks; the few geese and pigeons that are kept are entirely reared as pets; and pullets are very scarce, even in the parts where Muhammedans most abound. The chief supply of animal food consists of venison and hares killed in hunting by the Rajputs, and

swine which are sacrificed by the very dregs of impurity, suitable enough for the manner in which these animals are reared, and in a state of poverty, which may be aptly compared to the leanness of their food. The lakes of this district afford an astonishing supply of the most delicious water-fowl, but it is only on the Bakhira Jhil that any advantage is taken of this supply. On the whole the quantity of butcher's meat and poultry used, as I have mentioned in Shahabad, is in no manner connected with the wealth or ease in which the people live; nor does the vast number of wild animals offered by nature for food at all compensate for the neglect of domestic stock. Except in the capital no butcher kills regularly to stand the chance of the market; nor is beef any where exposed publicly for sale.

Fish has by nature been provided in abundance; but this food is not in much request, a great many rejecting it as contrary to religion, and some as contrary to health. Owing to these prejudices the demand is small, and the fishermen are thence probably unskilful, so that a great part of what is taken is secured in the marshes, as these become nearly dry. Whether or not the wholesomeness of the food is affected by this circumstance, I will not take upon myself to say; but such seems to be the opinion of the natives, and there can be no doubt that it affects their taste, and that fish of the best kinds caught among the weeds of these marshes have a very disagreeable flavour. The fish in the running streams, of the same species, are excellent; but owing to want of skill are seldom procurable.

Notwithstanding the vast extent of pasture, and the number of cattle, milk, during the greater part of the year, is a scarce article, and the greater part of the curds that are used have had the butter previously extracted. The scarcity is owing partly to the want of vegetation, except during the four months of the rainy season; and partly to the people being unwilling to deprive the calves of any milk. The preparations of the sugar cane enter less into the diet of the natives of this district than in that of any hitherto surveyed. They are used in the same manner as in Shahabad. People living here in the most luxurious style use boiled rice daily, with unleavened wheaten cakes occasionally as a change, and have as seasoning a curry of pulse, and one or two of vege-

tables, both seasoned with butter, turmeric, capsicum, salt, and spices. They use curds daily, and a little coarse sugar or molasses occasionally. The use of animal food is entirely accidental, and depends on their religious opinions more than their luxury, all the sect of Vishnu rejecting it, while many impure and miserable creatures enjoy it often. People less easy, use oil in place of butter, and have no foreign spiceries; and it is not always that they procure curds. Those less easy, have no curry of vegetables, and procure curds in the cheap season alone. Those in still greater difficulty, have rice at the cheapest season only, or on high occasions, and use whatever grain is cheapest, while they seldom procure pulse except in harvest, or curds except on great occasions, and the quantity of oil and salt that they procure is very limited. It must however be observed, that towards the northern frontier rice is at all seasons the cheapest grain, and there its regular use is no indication of wealth nor luxury.

The use of Ghiu or boiled butter is nearly to about the same extent as in Shahabad, but that of oil is more restrained, than in any of the districts hitherto surveyed. The quantity considered as a full daily allowance for 10 persons young and old, varied in different places from 10 to 48 p. w. and on an average was $25\frac{72}{100}$ p. w. equal to $25\frac{47}{100}$ s. w. of Calcutta, or a trifle more than 10 ozs. avoirdupois weight. The second class is said to use from 5 p. w. to 24 p. w. average $13\frac{52}{100}$ p. w. equal to $13\frac{4}{10}$ s. w. or $5\frac{1}{2}$ ozs. The third class uses from 3 to 12 p. w. average $7\frac{43}{100}$ p. w. equal to $7\frac{36}{100}$ s. w. or rather more than 3 ozs. Finally, the fourth class uses from 2 to $7\frac{1}{2}$ p. w. average $3\frac{36}{100}$ p. w. equal to $3\frac{32}{100}$ s. w. or $1\frac{36}{100}$ oz. These quantities, as usual in the estimates of other districts, include what is burnt for the lamp; and in the fourth class, are many who have their food seasoned with oil on peculiar occasions alone; but that is chiefly owing to the aversion of some of the low pork-eating tribes to this seasoning.

The quantity of salt said to be a full allowance for a family of 10 persons, varied from 10 p. w. to 30 p. w. average $21\frac{64}{100}$ p. w. or $21\frac{43}{100}$ Calcutta s. w. or $9\frac{8}{10}$ ozs. avoirdupois. The second class is said to procure $4\frac{3}{4}$ ozs. The third class $3\frac{3}{4}$ozs. The fourth class $2\frac{15}{100}$ ozs. All procure more or less daily. There being here no monopoly on salt, the quantity used compared with that in the districts hitherto surveyed, will tend

to throw light on the effects of raising a duty on this article by that means; and it will appear, although the higher classes in Shahabad use more salt than those here, that the lower classes here are much better provided, but this is probably owing to higher wages arising from a scarcity of the labouring classes; and it seems exceedingly doubtful whether, if the monopoly were removed in Bengal, any considerable difference in the consumption of salt would take place. The salt consumed here indeed in general, pays no revenue to the Company, as it comes chiefly by land, and pays transit duties to the Nawab Vazir alone; but owing to these and the land carriage, the price is not very much lower than that of sea salt was in Shahabad, the quantity which costs there 5 rs. selling here for about 4. Were the salt brought by water from the western provinces, it would pay duties to the Company, which would probably raise it nearly as high as that which could be brought from Bengal under the monopoly. In fact the levying the tax by means of transit duties is liable to strong objections on account of inequality, as many altogether escape payment, who live near the salt works, or pay to a foreign state, as in this district. Nor could this be remedied without the establishment of numerous custom-houses, attended by a heavy expense to government, and by endless vexations to the merchant. A kind of excise has I believe, been attempted in the western provinces with very little success, and I am inclined to believe, that even there a considerable revenue may be most easily realized, and that with the least vexation to the subject, by means of the monopoly, which of course implies a prohibition of the manufacture in our western provinces, or of importation from the western states, except on the account of government. Capsicum is much less used as a seasoning than in Bengal, and many in a great measure reject its use, considering it prejudicial to the eyes. In many parts turmeric is not used with curry made of the pulse called Urid, that is with the curry most common in this district, but it is used with every other curry, and in other parts it is used with the Urid. The Muhammedans use a good many onions, and the low Hindus garlic, but neither is taken to such an extent as is usual in Bengal and Behar.

Although the people here are but very poorly supplied

with seasoning, they have abundance of nourishment in various kinds of grain. On an inquiry after the actual consumption of 19 families of a rank exempted from labour, in different parts of the country, I found, that they daily consumed at the rate of $343\frac{4}{10}$ p. w. or 341 Calcutta s. w., or very nearly $8\frac{3}{4}$ lbs. avoirdupois of grain for five persons young and old; and in the same manner, on a comparison of 21 labouring families, I found that five persons consume grain daily at the rate of more than 10 lbs. avoirdupois. On this, with a very little seasoning and water for drink, where the climate is healthy, they are a stout handsome race, of very considerable activity, and high courage. No substitute is used for grain except in famines, none of which has happened since the year of Sambat 1840, (A. D. 1783), and except by a few of the wretched Bhars formerly lords of the country, who use the roots of wild yams for a part of their subsistence.

The use of palm wine, as in Shahabad, falls very much short of that in Behar, and falls also much shorter in reality than would appear from the tables, partly for the reason stated in Shahabad, and partly because it is only from one to two months in the year, when the liquor is most plenty, that it is any where worth while to take a license.

The quantity of distilled liquor consumed is very great, as may be known from the number of stills, and amount of the duty. This is so great, that it is impossible that the low tribes should consume the whole, they being much more willing than able to purchase this luxury. The gentry indeed entirely disclaim the honour of good fellowship; but this I believe, arises from what they ought to do according to their creed, and is not at all conformable to practice. I saw one man who said he was a proprietor of land, and a scribe by birth, who was on the road in the morning most notoriously and insolently drunk, and several of the high-born chiefs, with whom I had interviews, appeared to me intoxicated; but whether or not with liquor, I cannot take upon myself to say. The greater part of those who intoxicate themselves with the hemp plant, use that which grows spontaneously.

Except a few common characters, no women smoke tobacco; but after the age of 20 a large proportion of them chew that drug, as do also a great part of the men, although these also indulge in smoking, and not a few take snuff. The consump-

tion of tobacco therefore is enormous, although the (hukka) pipe is not so incessantly in their mouth, as is usual in Bengal. Four pipes a day is reckoned a full allowance for a smoker, and each pipe may contain 2 p. w. (356 grains) of the leaf mixed with an equal quantity of molasses.

Betle is far from being so much used as towards the east, still however, many people have their mouths very frequently filled, although not so as to prevent articulation, and it is an essential at all great occasions; but on the whole it is here less used than in Shahabad.

The oil most commonly used for the lamp as well as for eating, is that extracted from the cruciform plants, but in some places linseed oil is used to a considerable extent for both purposes: as is also that of Sesamum, and the Mahuya. The other kinds of oil mentioned in the appendix are only used for the lamp; but their quantities are trifling. In this statement will be found an estimate of the proportion of different kinds of fuel and lamp oil used in different parts of the district; and of the extent to which the convenience of a lamp is enjoyed. Candles are not used by the highest families. Almost all burn a fire by their bed in cold weather.

In the appendix will be found an estimate of the extent to which the inhabitants of this district are provided with attendants, and means of conveyance. The equipage of the chiefs, as I have stated, is chiefly suited for the sports of the field; and, when they go out to the chase, they are accompanied by a good many armed horsemen; but many of these are their kinsmen, who still adhere from affection to the heads of their families. The elephants mostly belong to the chiefs, or to the principal collateral branches of their families; and the camels are chiefly employed to carry their baggage. One of them belongs to a religious mendicant, and is employed to carry the drums that proclaim his faith in the prophet, and his devotion to Allah; for, as usual in the east, he does not hide his light in a bushel.

None of the horses are worth more than two or three hundred rupees, which in this country will purchase nothing tolerable. The ponies, I think, are rather better than in Shahabad; and it is said that the water of the Teri, which passes Nawabgunj, is favourable for this kind of cattle; but the greater part of its course is in the Vazir's country. Many of

the ponies are employed for carrying goods, especially about the capital. The Hindus who cannot procure a palanquin, when bridegrooms, do not here scruple to ride on horseback.

One Raja has a two-wheeled chaise, after the European fashion, drawn by a pony; but no other carriage belonging to a native, is drawn by a horse, and the number of travelling carriages drawn by oxen, is quite inconsiderable, although few of the gentry or even of the Pandits, have any scruple about going in them. The few that are, belong chiefly to prostitutes. The old palanquin, with a long arched bamboo, has now mostly gone out of fashion, and is retained by only one chief. The old ones are kept by bearers, and let for hire to those who wish to make a conspicuous figure at their marriage, and give from one to three rupees for the occasion. The Kharkhariya, in humble imitation of the palanquins used by Europeans, has now become the fashion for men of rank. Few or none, except some chief native officers of government, at the capital, keep bearers in constant pay; but men of large estates give farms at a low rent to their bearers, who are ready at a call, and receive food when employed. The lowest kind of palanquins, which are small litters suspended under a straight bamboo, by which they are carried, and shaded by a frame covered with cloth, do not admit the passenger to lie at length, and are here called Miyana, or Mahapa. In some places, these terms are considered as synonymous, in others, the Mayana is open at the sides, and is intended for carrying men, while the Mahapa, intended for women, is surrounded by curtains. On account of this confusion in the nomenclature, I have not been able to form an estimate of the proportion of each kind.

Free domestic servants, both male and female, are more numerous here in proportion than in Shahabad, and receive usually money wages, with food and clothing; but the women receive less than the men. Where food or land is not given, men-servants get from 2 to 3 rs. a month, and women from 8 to 16 anas. They beat rice, bring home water, and clean the house and cooking vessels. The women-servants are usually called Tahalin, but sometimes Laundi, although entirely free; yet this term is also used for slaves. The same is the case with the term Nufur, which is applied both to slaves, and to horse-keepers, although these are free. As there are very few

slaves, the women of the gentry are in general exposed to perform much dirty drudgery, and many of them must even carry water from the well, a labour, however, which is chiefly confined to the old; as such an exposure of youthful beauty would be considered as highly dangerous; nor is any woman of rank sent out for this purpose, when the circumstances of the family permit it to hire a woman of lower birth; neither are the people here scrupulous about who carries home their water, provided it be in their own vessels; only the very low tribes are excluded. There are, besides, many poor women, who live entirely by carrying home water for families in more easy circumstances, but not able to keep a regular servant. These women, as usual, are called Panibharin, and each may make from 4 to 8 anas a month, besides as much cloth as she uses, and some food. They can, besides, spin a little, especially when they make only a low rate of wages by carrying water.

The slaves, except on the boundaries of Saran, have been entirely introduced from the province of Behar, by high-born chiefs, who honoured the upstart families of that country, by taking their daughters in marriage, and received of course many marks of these upstarts' gratitude, among which were the slaves. Little profit has arisen from this present, and the slaves, except in one division bordering on Behar, have not been employed in agriculture; but wait on the persons of their new lords, and are treated with great kindness, nor are they ever sold. In the division of Parraona, bordering on Sarun, are 250 families of slaves, of whom the greater part ($\frac{4}{5}$) is employed in agriculture. These slaves are of the Kurmi tribe, to whom that part of the country chiefly belonged. They all live in their master's house, receiving food and clothing, and are not suffered to intermarry with free persons. The children belong to the master of the father; but no man scruples to give his girl in marriage to another man's slave, when he wants her. They are never sold, and the women attend their ladies, while the men work in the field. If any female slaves are purchased to administer to the pleasures of wealthy Muhammedans, the whole transaction is so involved in mystery, that no estimates could be formed, without recourse to means of violence, that would be highly disgusting. It is probable, however, that

some such slaves exist, and are procured from the mountaineers, many of whom are ready to dispose of their children.

The number of common beggars in proportion to the number of people is much smaller than in Shahabad, being only estimated at 1145; but the charity of the people is so exhausted by religious mendicants, that the sufferings of the actual poor are severe, and in sickness they are as much neglected as in Behar or Shahabad. It is much, however, in favour of the people of Bellawa, that many there permit the necessitous poor to sleep in outhouses, and give them food when sick. Among the religious mendicants are many Brahmans, stout fellows, but too lazy to work. Some of these hang on about almost every village; and, although they do not pretend to have dedicated themselves to God, nor to abstain from any indulgence in their power, they take away a large share of the subsistence, which ought to be held the due of the lame, blind, and infirm poor. The police, in withholding the scourge of justice from such idlers, is exceedingly defective.

The people here are neither so industrious, nor so skilful in agriculture, as those of Behar. They are not quite so jealous of their women, or at least do not show it in such absurd lengths, although this passion is a strong feature in their character. They are more honest, I think, than in any of the districts that I have hitherto visited; so that there are fewer robbers and house-breakers than usual; but there is a good deal of petty pilfering, especially about the capital, and Parraona. All classes are uncommonly civil, and especially the Rajput chiefs, every one of whom, that I came near, showed me many marks of consideration. All classes, however, were more jealous of my views in travelling through the country, and gave less satisfactory answers, than even in Shahabad. This is partly no doubt to be attributed to an inferior knowledge of European arts; but much also must be attributed to the incessant demands for an increase of revenue, and the unsettled state of property, that have continued to harass the people ever since the English government was established.

Education of the people.—In some divisions of this district there are no schoolmasters to instruct the youth in writing

the vulgar tongue, and arithmetic; and there children are generally taught by their parents, or, if there is a family of high rank, the children are taught by one of the clerks who manage the estate. In many others, the schoolmasters, called here Bhaiaji, do not reside, or at least do not teach, the whole year, and are only employed in the rainy season; but, on the whole, there is little difference in the plan followed here, from that adopted in Shahabad.

In every place the Hindi dialect is used; but it differs much from that spoken either in Patna or Shahabad; and the Patna people understand the women here with some difficulty. The dialect used by the Tharus, the most ancient tribe in the country, does not differ essentially from that of the neighbouring peasants, for the dialect differs as usual in every Raj, or barony. The Bhars, also an ancient tribe, are the most difficult to understand. The highest and most learned ranks, such as Pandits, speak in their own family the vulgar dialect, nor do they use any other, when they write on mere worldly affairs to vulgar men. Some of the learned cannot, however, read a letter in this dialect; and must for this purpose procure some common fellow, and entrust him with whatever secret the letter may contain; for the Pandit knows only the Devanagri, which is quite different from the Nagri, used in business. In Bengal, where the same character is used for both the sacred and profane languages, this inconvenience, which is very great, is not felt. The vulgar dialect spoken here is called Gangwar boli, or the language of clowns; but the women would laugh, if the men attempted to speak a more refined dialect, such as that of Laknau, or Patna, or such as is used by persons of rank at Gorukhpoor. This is called the Shahar boli, or dialect of citizens, and is attempted to be used both in writing and speaking by all who attend the courts of law, or the presence of Europeans, as far as they can, but with Europeans and Muhammedans, all correspondence is in Persian. There are songs in the clownish dialect, which are used at marriages by the women, and at religious ceremonies by the persons of low tribes, who are priests for the local deities. The poems of the Bhats, and of the Mirasin dancing girls, and other public performers, are in the polished dialect of cities.

In the high dialect, composed of the city language, interlarded with Sangskrita, the most common compositions are

the Ramayans of Tulasidas and Kesavadas, and the Surasagara and Satasai, two works concerning the loves of Krishna and Radha. The former was composed by a blind Brahman, whose name is unknown, for Suradas implies merely a blind person. The Satasai is a work of Behari, a Brahman of Antarvedi, and is very difficult to understand. The Ramayan of Kesava, is supposed to have been composed in the year Sambat 1658 (A.D. 1601), and is called Chandrika. These works are chiefly read by shopkeepers, scribes, and proprietors of land, and are not thoroughly understood by Pandits, and still less by those who have not made that a peculiar study, and are ignorant of the sacred tongue. Many, however, as usual, read these works who do not understand. It is on this account not uncommon for people to assemble, and one man to read, while he, or any other person who understands, explains the meaning in a more simple dialect.

The Raja of Onaula, and some Brahmans in his vicinity, have studied not only the Prakrita, which is supposed to have been spoken by Ravana, of Langka; but they are skilled in the dialect of the infernal regions, which is called the language of dragons (Sarpabhasha), from the enemy of mankind, at whose court it is spoken. I procured a copy of the Pinggala, a work composed in this curious tongue, with a commentary in the language of the gods (Sangskrita). The book treats of Prosody, so that the delusive flattery of poetry is in fashion at this court, as at many others. The dialect seems to be merely a fanciful variation of the Sangskrita language. The study of the Persian language is on nearly the same footing as in Shahabad, and this tongue is looked upon as the dialect proper for all persons of rank in the state; but many of the Rajas have not given themselves the trouble to acquire it; and all the Brahmans, who pretend to purity, would be disgraced by the study of any infidel language, the knowledge of all such being contrary to law. The importance, however, attached to a knowledge of Persian, may be estimated by knowing, that as many people are employed to teach it, as are employed to instruct children in the vernacular tongue.

The proprietors of land (Numberdars) are not better instructed than those of Shahabad. Of the sacred order, one-half can neither read nor write, and among these are many priests and spiritual guides, who have the ceremonies by rote;

$\frac{1}{8}$ can indite an epistle, and $\frac{3}{8}$ can sign their names, a degree of knowledge called here Katakshari. The Kayastha tribe, or the scribes, are here numerous, and in general are qualified for business, especially by a great knowledge in the abysses of chicane used in revenue accompts, and they have had a very fine field in the largeness and authority of the register (Kanungoe) establishment, although on the whole the collection of the rents gives employment to fewer than usual, the establishments kept by proprietors of land being uncommonly small. Fewer therefore in proportion have applied themselves to study accompts than in Shahabad, and the number of those who have gone abroad for employment, little exceeds that of the strangers employed here, while a very large proportion of the scribes, as well as of the sacred order, lives entirely by agriculture. I have no where seen the scribes so ignorant of the state of the country, or at least so unwilling to communicate knowledge, and this applies in a particular manner to the chief of them employed in the public collections, who, notwithstanding the most full orders issued for the purpose by Mr. Grant, the collector, would communicate nothing on which any reliance could be placed.

Where the native officers of police had even tolerable allowances, I found many of them very decent intelligent men; and even some of those, whose allowances are altogether trifling, appeared to me men of exemplary conduct. In particular I must in justice mention Mir Bundeh Ali, the Mohurir at Bhewopar, who on a salary of eight rupees a month was respected by the people under his authority, and bore a character not only of activity, but of integrity, that was highly exemplary. The ladies of the high born chiefs can in general write, and understand the amorous effusions of Tulasidas and other mystical poets; but no other women presume to acquire such knowledge, and the childless widowhood of many of these ladies is more usually attributed to this knowledge, than to the dissolute lives of the chiefs, with whom they had the misfortune to be united.

In the Appendix will be found the result of my inquiries respecting the state of common education in this district; and the number of schoolmasters and teachers. In this district I heard of five Maulavis, who professed Arabic science, and Persian literature; for the common study of Persian is

confined entirely to forms for the transaction of business. These Moulavis have a few pupils; but there is no public establishment for the encouragement of these kinds of knowledge. The Moulavis indeed have free lands: but these are considered as entirely at their own disposal, nor has any one a right to claim their instruction. Sobhan Ali, Muhammed Munir, and Kuramutullah, however, of Gorukhpoor not only supply 15 pupils with instruction, but with food.

The Kazis hold their office by hereditary right, and their jurisdictions are commensurate with the Rajas or baronies, into which the country is divided, and not with present divisions of either police or revenue. They have suffered much by the change of government, as they say, that the pensions, which they formerly enjoyed, have been withheld by the Company's government, although they have been allowed to retain the lands, which they held free of revenue. In this perhaps there is some mistake, as it would appear difficult to point out a principle of justice, on which the one allowance should be granted, and the other withheld; and the general intention of government has undoubtedly been of the most liberal nature, as every claim, however absurd and ill founded, to a possession of land granted in perpetuity free of revenue, seems to have been allowed without investigation. The claims of Kazis were neither unreasonable nor fraudulent; nor, as I have said, am I aware of any pretence, on which they can justly be withheld. They are in general men of respectable characters, but not learned; and few, if any, understand the Arabic language.

The professors of Hindu science are here called merely Pandits; but many people enjoy that title, who certainly do not understand any learned language or science, and it is alleged, that some Pandits cannot even read, but have committed certain ceremonies and passages in the sacred books to memory. The schools which the professors keep, are called here Sala. In no district, which I have hitherto visited, are there so many teachers in proportion to the number of people, the Pandit of the survey having met with no less than 94 persons, who professed to teach, and who furnished him with a list of the books which they use, and the number of pupils which they have. The particulars will be found in the Appendix; from which it will be seen, that

there are 516 students, or between five and six for each teacher. Ramajay, my chief native assistant, however alleges, that the Pandit of the mission was deceived, and that a good many of those, who pretended to be professors, were not so in reality; but having obtained fraudulent grants of free land, wished to pass themselves for men of useful science, in order to secure their property. Thus in Gajpoor 23 persons called themselves professors to the Pandit, but Ramajay was informed, on authority which he thinks undoubted, that only four of these persons taught any science, although all may be men of learning. How far he is accurate, I do not know; but I have little doubt, that many people here are capable of asserting any thing in order to procure lands free of rent, the success, which frauds have met, having given very great encouragement to their commission. On the other hand, again, I have heard it alleged, that in the Pandit's list several professors have been omitted. On the whole, although the Pandit may have in some instances been deceived, he has omitted others; and his list, although not accurate as to individuals may perhaps be not far from expressing the general state of learning. All the professors have endowments; but more than a half of them cannot afford to feed their pupils.

According to Manogyadatta of Jiva in the Bangsi division, himself one of the most learned persons in the district, and who has accompanied me to assist in composing its history and an account of the state of the people, there are seven others of the professors eminent for learning. The highest science is here reckoned the theology of the Vedas, which is more studied, than would appear from the reports of the Pandit of the survey, who like other Bengalese holds this science, if such it can be called, in great contempt. The doctrines of Sangkara are chiefly followed; and the works most commonly studied are the Vedantasar, composed by a pupil of Awaitananda, a Brahman of the south, who dedicated his life to religion; the Pangchadasi, and the ten Upanishad Bhashyas of Sangkara. The theologians here insist, that every word, sentence and verse in the Vedas, as they now exist, was formed by Brahma before the earth, and that Vyasa did not alter a syllable; but only arranged the original parts into four books, which previously had been comprehended in one. All mention therefore of events, that have

happened since the creation, is supposed to be prophetical. Such, I believe, is the opinion, that very generally prevails among the Brahmans of the south, as well as those here; and, having been communicated to the learned in Europe, was supposed by them to imply, that the books now called the Vedas were the work of a great lawgiver named Brahma, who formed the laws of the Hindu nation, and introduced science. When it was discovered, that these works mentioned many personages, who lived very long after the commencement of the Hindu government, as the power of prophecy could not be received by any one but a Hindu, it was justly concluded, that they were not the works of the lawgiver Brahma, who in fact is a mere creature of imagination; and Mr. Pinkerton is fully justified in calling the Vedas modern forgeries, even had Mr. Colebrooke proved that they were written by Vyasa, and that Vyasa lived 12 centuries before the birth of Christ; for in comparison of the commencement of the Hindu history, before which the Vedas are alleged to have been written, even this distant period of Vyasa is but as yesterday. But that the Vedas, which now exist, were written by Vyasa the son of Parasara, or so early, seems to me completely incompatible with the mention made in them of the success, that had attended the ceremony used at the coronation of Janmejaya the son of Parikshita, by which he had conquered the world; for Janmejaya was grandson of Abhimanya, who was the great grandson of Vyasa the son of Parasara, and it is altogether impossible, that so remote an ancestor should live to celebrate the conquest of the world by his descendant. But besides this conquest is not likely to have been mentioned by any contemporary author; for in all probability the supreme government of India was not then vested in the spurious offspring of Vyasa, but in the house of Jarasandha. Mr. Colebrooke indeed states, that besides the descendant of Vyasa he has heard from the Brahmans of another Janmejaya son of Parikshita; but on a careful examination of the genealogies, extracted from the Purans by Manogyadatta, I can find no such person; nor can that learned Pandit recollect any such, although there are many Janmejayas, especially the son of Puru, king of Pratishthan, and the names are so alike, that they may readily have misled the Pandits consulted by Mr. Colebrooke,

speaking from recollection. If a Vyasa, therefore, was author of the present Vedas, it was not the son of Parasara, but some person, who probably lived shortly before Sangkara Acharya; and many in fact allege, that the instructor of this great doctor was named Vyasa. If so, the author, or compiler, or perhaps rather corrupter of the Vedas, lived about the ninth or tenth century of the Christian era, in the age emphatically called dark, and to judge from the account given of the Vedas by Mr. Colebrooke, the work is worthy of the age.

It is probable, however, that before this time there existed a system of science (Veda), extending, according to a passage quoted by Mr. Colebrooke, not only to the four kinds of sacred knowledge, detailed in the present Vedas, but to grammar and history, the first of which in the passage alluded to is called the chief of the (Vedas) sciences, although the books now called Vedas do not treat on the subject. The historical part, there is reason to think, was valuable; but being irreconcilable with doctrines, which the author wished to establish, was totally new modelled in separate works called the Purans. Although all these go under the name of Vyasa, there is certain grounds to doubt of his having composed the whole, as it seems scarcely possible, that any one man in his senses would attempt to pass on the credulity of mankind a number of books, treating on the same subject in manners totally discordant and contradictory, as happens in these works. Many circumstances mentioned in these Purans, would show the time in which Vyasa actually lived, could any of these works be traced with certainty to him; and I suspect, that not only the historical part (Purana) of the ancient system of science, but that written by Vyasa has been new modelled in the various works now called Purans, all probably very modern, and composed by various persons.

Many of the professors explain the legendary knowledge of the Purans to their pupils; but the only work employed for this purpose is the Sri Bhagwat, the meaning of which is so obscure, that after understanding it all the others become easy. The explanation followed is that of Sridhar Swami Vopadeva. No one here doubts of the Sri Bhagwat having been composed by Vyasa, and the idea of its being the pro-

duction of Vopadeva usually excites a laugh. I am informed that this work by the Pandits of the college of Fort William is universally attributed to Vopadeva, and the followers of Sangkara in the south have adopted the same opinion; but by the followers of Ramanuja and Madhava the doctrine usual in Gorukhpoor is strenuously maintained. Whoever composed it, from the genealogies it contains, evidently lived towards the end of Hindu independence, or even later.

In this district the study of the books included under the name Kabya makes a separate profession, although no one teaches it alone. It is considered, however, as distinct both from grammar and law, and even from the legends of the Purans, although the subject and style of both kinds of legend are nearly similar, and both are poetical effusions, nor has the word Kabya any meaning but that of poem, and the Ramayan of Valmiki, although the work of a Muni, is here included among the Kabya. The real difference, therefore, is not in the Kabya, being written by mere men, and the Purans by Munis, but in the subject. The books called Kabya, like our heroic poems, treat chiefly of war and love, while the Purans contain also Cosmogonies and Theogonies. The books studied here under the name of Kabya, and they are much read, are the Ramayan of Valmiki, the Raghu and Kumar of Kalidas, the Naishad of Sri Harsha, who was a Mithila Brahman, contemporary, it is supposed, with Akbur and the Magha, which is here supposed to have been composed in part by a rich Brahman merchant. After he had composed a great part in couplets, each of which contains the word Uchchakai or high, he was unable to proceed farther with this conceit, and offered 100,000 rupees to every Pandit who would compose another couplet judged fit to have a place along with his effusions; nor were the merits of the new couplets to be tried by the envy of the genus irritabile, or by the malice of snarling critics, of which probably the merchant had a superabundant experience. A much more certain method of appreciating the value of the couplets was adopted, although in the times of Horace and Virgil it might have been deemed severe; but to the soaring genius of the east it is partiality, and not severity, that is dreaded. The poetical merchant, therefore, wrote a copy of each couplet on a fair leaf, and threw it in the fire, which instantly

consumed the poorer productions, while those worthy of preservation remained untouched. This merchant was contemporary with Kalidas, who added several couplets. The art of composing verse is called Chhandagrantha, and a work called Banibhushan on this subject is taught by one professor. It is written in the language of the Gods; but the Pinggala on the same subject is composed in that of the Devil, and is sometimes studied even on earth.

The study of metaphysics (Nyayasastra) is considered very honourable, and next in dignity to that of the Vedas; but the labour attending the investigation has overcome the desire in the Pandíts for reputation, and none has made great progress in the study. A science called Mimangsa is here considered as next in dignity to the crooked paths of metaphysics. One man blind with age pretends to have taught it; but, so far as I can learn, no one in this district now applies to this science, and even in Benares a few only are at the trouble. It instructs mankind in the manner of conducting some valuable ceremonies (Yagyang), which few of the Hindus now possess means of performing. Amrita Rawa, a Maharashtra chief now at Benares, lately however expended 16,00,000 rupees on one of these ceremonies called the Somayag, which is considered as far from being of the highest nature. The ceremonies which the science of Mimangsa teaches are performed according to the Vedas, which it must be observed admit of sacrifice; and those who admit of the existence of the Atharwa Veda, as is generally the case here, have magical ceremonies, by which they can injure their enemies, although the use of these, according to the teachers of the Mimangsa, is sinful. The ceremonies may be performed with a view to procure favour both in this life and in that to come; but very generally, I believe, are undertaken in the hope of the former, and differ chiefly from the kind of magic called Agam, in following the forms of the Vedas, while in the Agam the forms of the Tantras are adopted. The Agam is reckoned very inferior in dignity to the Mimangsa, but the latter is now neglected, and the former is a good deal studied, because the ceremonies directed in the Tantras are within the reach of ordinary fortune. Although the ceremonies by which the enemy of the votary may be confounded, injured, or even destroyed, as I have formerly mentioned, are detailed in the

Tantras, these works as well as the Vedas declare that sin is incurred by such practices; yet, if mankind could be induced to confine themselves to such attacks on their private enemies, great advantage would ensue to society. One professor, Iswariprasad Tiwari of Onaula, is generally alleged to follow the Bamachari or Virbhav, and several others are suspected, but none openly profess it, nor would it be considered decent to allege the circumstance in the professor's presence. The books most read are the Mantramahodadhi, the Tantrasar, and Sarada Tilak. The latter is said to be one of the Tantras composed by the god Siva. The Mantramahodadhi is the work of Mahidhar, a Brahman of the south. There are besides studied the Yantrasar of Hariprakas, the Tararahasya, a book of the Virbhav, the Syamarahasya, another book of the same nature, the Tarabhakti Sudharnava of Vyangkat Acharya, and the Laktisanggam, one of the Tantras composed by Siva.

Grammar is considered the science next most creditable to the Mimangsa, and a knowledge of it is indispensable to acquire any sort of reputation, but some few astrologers and magicians do not profess to teach it. The term Sabdika, for those who profess this science, is here understood, but seldom used. Every man here studies the Saraswat, and almost every one the Chandrika. The author, Rama Sarma Acharya, was a Dasanami Sannyasi of Benares. Bhattoji Dikshita, a Brahman, the author of the Siddhanta Kaumudi, the Manorama, and Sabda Kaustubha, was the instructor of Rama Sarma, and his descendants in the 15th or 16th generation are said to be now (A. D. 1814) alive in Benares. The natives reckon five generations to the century, which is probably correct, where people marry so early as they do. The works of Bhattoji Dikshita, and two others, the larger and smaller Sabdendusekhar of Nagoji Bhatta, especially the first mentioned, with a commentary on it called Tatwavodhani are also much studied, and are of the school of Panini. This person is supposed to have been a Muni, contemporary with Krishna Vyasa and other great personages at the end of the brazen age (Dwaparyug). He composed the Ashtadhyayi often studied here. An explanation or enlargement of this was composed by Katyayana Muni, nearly contemporary, and one of the most celebrated Indian lawgivers. The book on grammar com-

posed by this law-giver is called Bartika; and is abundantly difficult to understand; but the most profound depths of Panini's school is contained in the commentary of Patangjali. Some suppose, that this person was a learned grammarian of the sacred order of Gonarda, who prayed earnestly to Sesanag, the serpent who supports this earth on his head. Afterwards, as he was pouring out water to the sun, he observed a small serpent in the water, which, on being poured out grew very large, and had a thousand heads, all of which began to speak on the subject of grammar, and the Pandit began to copy what was said, and this composes the work called Mahabhashya. This is very well, and would convince the most sceptical that ineffable confusion of ideas prevail in the work; unless it were supposed that the Brahman had 1000 pair of hands to copy, what the 1000 heads spoke. Others however allege, that Patangjali was an incarnation of the serpent himself. It will be readily imagined, that this controversy cannot be determined, and that no mention is made of either circumstance in the book, which is entirely confined to the most difficult discussions of grammar contained in 25,000 couplets. Raja Bhartri Hari, brother of Vikrama composed 100,000 couplets in explanation, but very little of this work is to be found here, and the people study the Mahabhashya chiefly by means of the commentary of Kaiyats Upadhya of Kasmira, which contains only 25,000 couplets, and is called Bhashya Pradipa, and the commentary of Nagogi Bhatta, a Maharashtra, in 50,000 couplets, which is called Bhashya Pradipa Dwota. The Kasmirian is supposed to have lived six or 7 centuries ago. The Maharashtra is much later. The Vaiyakaran Bhushans are also commentaries on Panini, the shorter containing 3,000, and the longer 6,000 couplets, and are occasionally consulted. Balam Bhatta, who died about 12 years ago at Benares, composed a commentary of 50,000 couplets, which has not reached this district. His father had been instructed by Nagoji Bhatta. No other vocabulary (Abidhan) except the Amarkosh is used, nor does every teacher of grammar deem it necessary to teach any vocabulary, the pupils acquiring the knowledge of the words at the same time that they do that of the grammar. Those who use a vocabulary, generally begin by teaching it before they commence the grammar.

Those who study the depths of grammar, have no occasion for a preceptor to explain the mysteries of the law, or of legend, being able to comprehend the meaning of all the works on those subjects. But those who read only the Saraswat or Chandrika, must have both the books on law and the legend of the Purans explained to them.

The study of the books of law, called here Smartwa, is not considered very honourable; but by far the greater part of the Pandits, even who are not professors, study their law, and they consult more books than seem to be in use in the districts hitherto surveyed. The book most commonly studied is the Mitakshara, a commentary on the law of Aagyabalkya, according to a passage in which the important point of succession was decided, the landed estate going to the eldest son, bound only to provide the collateral branches in daily subsistence. It is said, that lately an order from Calcutta has come to reverse this, and to establish the law of Manu, which divides all estates equally.* Indeed this division is admitted in several other passages of the Mitakshara, but was never received in this district. It is here alleged, that this work was not written by Padmanabha, but by his son Vigyangneswar. Next to the commentary of Mitakshara, the book on law most commonly read is the Kalamadhav composed by a Madhav Acharya, but not the celebrated doctor of the south, who instituted the sect of Krishna. This work professes to rest not only on the authority of all the 20 luminaries of the law, but on the Vedas and Purans, and seems to be what we would call a digest.

These are the only books commonly referred to as authority, but many others are to be found, or at least the professors pretended to have them. The Pandits here say, that only the first author of the law (Dharmasastra), that is Swayambhuwa, is entitled to the name of Manu, and a book supposed to be composed by him, but evidently a modern fabrication,

* I paid much attention when in India to the law of equal partibility of property; and am of opinion, that the highest Hindu law-givers sanction it; but however, it may benefit the mass of the people, the taking away of a testamentary disposition, destroys in a great measure the incitement to the acquisition of property over which the possessor can maintain an influence, after death has deprived him of its personal enjoyment.—[Ed.]

is common. It is called Manu, Manu Smriti, Manavya, Manawava and Manavi. The other 19 great luminaries are only Munis. The professors here pretended to have the laws of Parasara, Yagyabalkya and Katyayana. They also pretended to have some other works on the subject, composed by mere men. The Kalaniraya, written by Gyangneswar, I suspect the same with the author of the Mitakshara, for the Pandit of the survey often writes carelessly. The Samayamayukha. The Smritisaraddhara written by Viswambhar. The Nirnaya Sindhu, mentioned in the account of Behar. The works of Rudradhar, a Mithila Brahman. The Saroja Sundra of Visesh Acharya.

The science Jyotish (astrology), is much studied, but is not in general accompanied by any considerable knowledge of astronomy. Four or five men, however, are said to be able to construct almanacs with accuracy, and make them for their own use; but the great object is to foretel future events, and the almanacs in common use are all brought from Benares. The motions of the heavenly bodies, however, very little interest the people here, and the Jyotishas are consulted; First, at births, to know the future events of the child's life. Secondly, to find out fortunate times for the performance of any action of importance. Third, to explain fortunate and unlucky days from the almanac, and the time for performing certain religious ceremonies. They have not yet introduced the solar year even in common affairs, except where compelled by the forms of the revenue accompts; for the Muhammedans of India have had sense in everything but religious affairs, to introduce a solar year. In order to find out the time of day at which events happen, they use a rod of Khari, and judge by the length of its shadow. At night they calculate by the rising and setting of stars. Such accuracy is only attended to, when the person consulting is a Raja or great man. In common they take the time by guess, which no doubt answers equally well. The discovery of bones, in situations proposed for a new house is not much used, but is occasionally required.

The books in request are as follows: the Bhaswati composed it is said, by Satananda in the 1021 of Shalivahan (A. D. 1099), and used in the construction of almanacs. The Makaran, another book used for the same purpose, and composed by Makaran, a Brahman of Benares. The Rambinad composed by Ramjoshi, a Brahman of Kraungchadwip. The Mu-

hurta Chintamani composed by Rama Bhatta, a Maharashtra Brahman, in the year of Shalivahan 1522 (A. D. 1600). It is used in finding out lucky times. The Muhurta Dipaka, and the Muhurta Darpana, these are very modern books. The Durbali composed by a Rama Sevak Acharya, a learned Sarwariya Brahman, who lived on the south side of the Sarayu about 30 years ago ; is chiefly studied by the lower order of priests. The Jatakas of Varaha Mihira ; there are two books of this name, the Laghu and Vrihata. The Lakadwipis, Tarwariyas, and Brahmans of the south dispute for the honour of having this great man in their tribe. His father was Adityadas of Kapittha near Ujjain. His wife Khana was also skilled in the fates. Nilkanthi—there are two books of this name, the Jatak and Tajik. In the latter many of the terms are arabic or Yavan, as the Brahmans call them; both these books were composed by Nilkanth, elder brother of Rama Bhatta, mentioned above. The Vastupradipa of Vasudev a Brahman of Sakadwip; it is chiefly consulted for discovering fortunate times for erecting buildings. The Shat Pangchasika of Prithuyasa, the son of Varaha Mihira. It enables the sage to answer questions, concerning what has happened, and what will come. The Bhuvana Pradipa treats on the same subject. The Grahalaghava was composed by a certain Ganes Bhatta, a Brahman of the south. It is a large work, and is used in making almanacs. The Lilawati used in calculations of space, was composed by Bhaskara Acharya. This is reckoned a profound work, and Manogyadatta doubts very much of the persons who said they professed to teach it, having any knowledge of the subject. The Ratnamla is a work of Sripati Batta, a Maharashtra Brahman. It is very much in use for ascertaining the fortunate time for common undertakings. Jataka Langkar.

Those who teach astrology alone are reckoned inferior to such as profess grammar, or any of the higher sciences. One professor of Sakadwip teaches and practices medicine. He is also a professor of grammar, which secures his rank. The Moulavi, or chief officer of the Muhammedan law, in the court at Gorukhpoor has the character of being skilled in the Grecian (Yunani) medicine; but he is too much engaged in business to be able to teach. He however, gives his advice to friends without fee.

Besides the professors who teach Hindu science, about 3,250 persons are dignified with the title of Pandit; but the acquirements necessary to obtain this are not great. No one of them is eminent, and many cannot read a word. Indeed the greater part cannot read with the fluency necessary to be used in the performance of ceremonies; and although they may hammer out the meaning of a letter, are under the necessity of committing the forms of prayer to memory. The understanding them is quite out of the question; and perhaps

justly, is considered of little consequence. All pretend to have some skill in the Hindu law, and of the valuable science of Jyotish. The lowest of them are called Karmathiyas, and resemble the Dasakarmas of Mithila; but they condescend to perform ceremonies for lower persons, and do so without disgrace. These amount to about 2,300, of whom 1,300 perhaps cannot read the ceremonies, and none understand the sacred language.

In this district it is reckoned legal for all Kshatris, or Vaisyas, to read the word of god, or of the Munis; but not to explain their meaning. Many of the Rajputs therefore, are taught by rote the portions of sacred writings used in prayer; and several chiefs have obtained a certain knowledge of the meaning. The Onaula Raja at present, is the only one who has made considerable progress, and his obstinacy in rejecting the advice of the sage, shows how dangerous such pretensions to knowledge might become. It is not legal for the Kayasthas to study the word of god or the Munis, but some old Kanungoes have studied some of the grammars published by men, and the works on the art of poetry. As in Shahabad it would seem, that their attention in study is entirely directed to the profane poets; but both those in the learned, and more vulgar dialects are perused.

No interlopers here pretend to interfere with the sacred order in explaining the decrees of fate by the science of Jyotish; yet some who profess it, are exceedingly ignorant, and are not admitted to the honour of being even Karmathiya Pandits; but are attached to the manorial establishment, and are called Dihuyar or Ganguhar Brahmans, or are mere wretches called Dakatiyas (robbers), or Bhangrariyas (pretenders).

About 230 women of low caste, as in Shahabad, pretend to be inspired by Mahamaya (the great mother); and to disclose futurity, especially in the result of disease. They even in some cases pretend to point out certain remedies, especially religious ceremonies, by which the patients may be relieved, and sometimes seem even to have been made tools for bringing certain places of worship, and certain images into credit. Even men of decent rank are sometimes compelled by the importunities of their wives to consult these creatures about

their children, although all reasonable men hold them in the utmost contempt.

The Hindus who practice medicine as a science, amount only, so far as I heard, to 43 persons, of whom by far the greater part consists of Sakadwipi Brahmans. Three Muhammedans are followers of what they call the doctrine of Galen and Hippocrates. These physicians are seldom servants. In usual they make from 100 to 300 rupees a year, and have suffered much by the change of government, which has very much affected the income, as well as the power of the higher ranks of natives. Between 20 or 30 people, who have no books on medicine, and if they had could not read them, exhibit drugs in disease, and are called Nardekhas or pulse-feelers, for the ceremony of feeling the pulse is in all cases considered as absolutely necessary. There are between 50 and 60 surgeon barbers, who cup, bleed, and treat sores, and some at Gorukhpoor are said to extract the stone from the bladder in the old manner. Those well employed may make 10 or 12 rupees a month, and in general give up shaving. They are mostly Muhammedans. The midwives here do nothing else but cut the umbilical cord, and are of very impure tribes.

The people who innoculate for the small-pox, are not here reckoned Ojhas, although they pretend, that their art consists in invocations and spells, calculated to conciliate the goddess (Devi); for here she is seldom invoked by the name of Sitala. None reside here. They are called Chhapahas, and all come from the east, and use incantations in the Bengalese dialect. The practice on the whole seems to be gaining ground, especially among the Hindus.

About 1,450 men pretend to be possessed of the art of incantation; and, although the greater part are of low castes, some are Rajputs, and some Brahmans even are not ashamed to profess the art, and claim a pre-eminence of skill; but no man of decent education is among the number: 350 are employed to cure the bites of serpents, and the remainder to cure the diseases supposed to arise from the influence of devils. Some of them pretend to take the devils to themselves. The belief in witchcraft spreads distress and dismay through the vulgar and weak-minded; it seems to be confined chiefly

to the parts of the country nearest the hills, and in Nichlaul it was alleged that 50 poor hags had the character of being witches. The Tharus however, are held, even by the best informed Pandits, with a good deal of fear, and are supposed to be possessed of supernatural powers like witchcraft, although not called by the same name. It was said in Parraona, that until lately the Tonahis or witches were numerous; but some judge sent an order, that no one should presume to injure another by enchantment. It is supposed, that the order has been obeyed, and no one has since imagined himself injured, a sign of the people being remarkably easy to govern.

The Sakhas are a kind of pretenders, who seem to be the remains of an ancient priesthood, whose chiefs were called Guro, of whom one or two still remain among the Tharus; but the common Sokhas are of all castes, even Brahmans adopting the profession, which is accommodated to indolence and deceit. The Sokha every Monday sits under some large tree, beneath a canopy, and generally on a platform of smoothed clay. People, whose kindred are sick, or who are involved in the troubles of law, make them offerings, and are instructed what to do in order to escape from both evils, the Sokha pointing out what deity or spirit can give the requisite assistance. The Sokhas do not rave like the women pretending to be possessed by the Mahamaya (great mother), and their number was said to amount to about 60 persons. The Guros are employed to avert the dangers of tigers, elephants and insects, when these destructive animals are ravaging the folds or fields of the husbandman.

Religion and Castes. *Muhammedans.*—The number of these believing in Muhammed has been taken from an estimate made in each division of the houses, said to be occupied by each class of the faithful, and is probably rather underrated. In this district many converts were formerly made, not only from the lower classes of artificers, but from the agricultural tribes. This was chiefly effected in times of scarcity, when the poor lost caste by eating impure things, nor is there any reason to think, that the government of the Nawab Vazirs was, here at least, in any degree intolerant, or gave any preference to those of their own religion.

Not only the converts, but even many Moslems of rank and foreign extraction, are tinged with the Hindu supersti-

tions, chiefly, as usual, owing to the fears of the women, who in cases of danger cannot be prevented from making offerings to the objects of Hindu devotion, when applications to their own saints have failed; and the Hindus, in their turn, are equally willing to respect the saints of the Muhammedan faith. The doctrine of caste seems nearly as strongly established among the Muhammedans as among the Hindus. Some of the Muhammedans also, especially weavers, have been infected with the desire of following new routes to heaven, especially that pointed out by Kavir; and these use larger beads, feed more abstemiously, and pray louder, and with more grimace than their neighbours. They do not, however, reject the prophet, and in common life follow the customs usual among the believers (Momin).

The office of Kazi is considered as hereditary, and all those who hold it, have some endowment in land. They had also salaries in money, and certain perquisites on particular days, both of which have been withheld since the Muhammedan government has ceased. For withholding the perquisites, as connected with the old religion, there may be some reason; but why a person, who had a hereditary right to a salary, as I have said, should have been deprived of it, and allowed to retain lands free of rent, granted on the same plea with the same salary, I do not understand. The duties of the Kazi here are to attest deeds, in conjunction with some other officers to superintend the sale of estates seized by the law, and to perform marriages. The two former duties are seldom entrusted to deputies, the last generally is; for the Kazi seldom attends at any marriages, except those of the great, and he attends there chiefly as a friend. The deputies are called Nayebs or Nekah Khanis. The term Molna is sometimes used; but there are no such persons independent of the Kazis. The deputy is seldom allowed more than one-fourth of the dues on marriages, and often not so much. The dues on each marriage seldom amount to half a rupee. Many of these deputies are weavers, some, however, are persons of respectable birth. At funerals, any one, that the relations choose, or can procure, is employed to read the Koran.

The Pirzadahs of this district are not in general so respectable, nor well endowed as in Behar; not from their

office being in less request; for perhaps seven-eighths of the faithful become Murids; but because in the neighbouring parts of the Vazir's country (Oude), there are several families of peculiar sanctity, which carry away a large share of the profit. The number of Fukirs is very great, amounting to between 850 and 900 houses, by far the greater part married, and mere peasants employed in agriculture, although they all beg as much as they can; and the greater part is provided with endowments in land, but in general too petty to support them without labour or begging. In their present subjection to an infidel nation, they are a very mild smooth set of people, who pour forth blessings even on those who refuse to give them charity, and who return prayers for scoffing.

Prayer and ablution are more attended to than in Shahabad. About 790 persons are supposed to perform Nemaz daily; but the number of these, who do so five times a day, is not great. They are reminded of their duty by 25 criers, some of whom have endowments; but others call upon the faithful, from a mere sense of duty, without fee or reward. One weaver only has found his way to and from Mecca; but pilgrimages to the tombs of saints are exceedingly common. Most of the places are in the territories of the Nawab Vazir (Oude), and not very far removed from this district.

In the mosques, or other places of worship among the Muhammedans, there is nothing like our forms observed; no priest presides to perform certain ceremonies for or with a congregation of the faithful, nor does any one in these places explain the Koran. In a very few mosques two or three people may assemble daily to pray at the stated periods, and a public crier may call the faithful to remember this duty; but of the few, who attend to his call, most perform their devotions at home. On Friday (the Muhammedan sabbath), a few more attend, but each man prays for himself; and, if there is a person endowed for the purpose of praying regularly, it is, I believe, always for celebrating a service in the king's name, that is for performing, what is called the Khotbah. At the Id and Bukurid a great many assemble at some place of worship to pray. By far the greater number of mosques are complete ruins, and are totally neglected, nor does any sanctity seem to be attached to them. Except the five Moulavis, and perhaps an equal number of pupils, none,

I doubt, understand the Koran, although abundance read at least portions of it. I heard of none who had committed the whole to memory. The duty of fasting, and the celebration of the Mohurrum are nearly on the same footing as in Behar.

As I have already mentioned, the doctrine of caste is as fully established among the Muhammedans of this district as in Shahabad; but the respective ranks of the castes are far from being well established. Nothing can more fully show the complete ascendancy, that the Hindus, and especially the penmen (Kayasthas) have acquired by the change of government, than that all the Pathans, and even Fukirs, who have been under the necessity of holding the plough, are now excluded from the rank of gentry (Ashraf), although many Rajputs and penmen, who have been guilty of the same meanness, retain this rank, and spurn the Pathans, before whom, the penmen especially, for many ages, bowed their necks in the most abject fear.

The Saiuds, descended of the prophet's daughter Fatemah, are supposed to amount to about 602 houses. The Ashraf Sheykhs, or persons of Arabian families, are now usually reckoned next in rank, and may amount to 1005 families. The Moguls, lately sovereigns, amount only to 157 houses. None of these three classes use the plough. The Pathans amount to about 1776 houses; but many, having held the plough, are now degraded. The Fukirs, amounting to 876 houses, are in a condition similar to the Pathans. Whatever may originally have been their birth, the children of Fukirs intermarry only with each other. Those who abstain from marriage seem to be at liberty to adopt whatever persons they please. A few have betaken themselves to commerce. There are 11 families of the Muleks, who followed Mulek Bayo in the conquest of India, and are reckoned among the gentry. No less than 214 families of the poets called Bhats have adopted the faith, that having been agreeable to the persons, whom it was most profitable to flatter, although most of them continue to use the same forms that they did when Hindus. They are reckoned among the gentry, although many are reduced to nearly the state of common beggars, having neither the stock nor skill necessary to procure a living by agriculture; but many have small endowments, and

they are betaking themselves to agriculture, as fast as means will admit. A very few families of the Muhammedan gentry have engaged in trade, and two or three, who have become artists, are considered as degraded. A great many have free lands, and most have farms, the cultivation of which they superintend. Those who enter into the service of Europeans as domestics, are all, as usual, among the impure tribes. About 7097 houses of the tribes of cultivators, who have been converted to the faith, continue in the practice of their truly respectable employment, and do not scorn the plough: a good many have now acquired the property of the soil. They are in some places called Turuk, in others Rautela, both considered as terms of reproach; but they are not held so low as the artists; who have adopted the faith. They are chiefly employed as ferrymen; but, as a great part of the tribes of boatmen are employed in agriculture, and as they cannot be called either traders or artists, I have placed them after the cultivators.

In this district there are only 34 families of the useful tribe of innkeepers (Bhathiyaras), nor are the whole even of these able to live by that profession; but some of them sell fire-wood and potters' ware, cut grass for horses, and prepare charcoal balls for smoking tobacco. Among the Hindus it would appear that there never were any such persons as inn-keepers, although in this district there is a peculiar caste, the people of which live by cutting and selling grass, which is a part of the Bhathiyaras' profession. The Bhathiyaras are said to have been originally constituted by Sher Shah, when that prince established inns throughout his dominions.

Hindus.—I have nothing new to offer concerning the origin of the castes, more especially of the Brahmans. I shall only previously observe, that a farther examination of the genealogies contained in the writings reckoned sacred, has afforded very numerous instances indeed of the sons of Brahmans being Rajas, of the sons of Rajas being Brahmans, and of inter-marriages between the two professions. This examination has also produced some instances of marriages or cohabitations with low, and even barbarous tribes, neither occasioning loss of caste in the parents nor children; of the same person at different times having been of different professions; and

even an instance of the son of king having been a merchant (Vaisya). These in my opinion show clearly, that in ancient times there was no such thing as caste; and the same genealogies mention many circumstances, which show that what are now called the rules of purity were not observed in ancient times. For instance, we find persons of the highest character, as Vyasa, taking to his bed his brothers' wives (still a common custom among the impure tribes), and having by these his brothers' wives two sons, Pandu and Dhritarashtra, who succeeded as kings of India, and were ancestors of a long series of princes. We also find five brothers marrying one woman, as still usual in Bhotan, and this woman (Draupadi) was not only of the highest birth, but is still addressed by the Hindus in their prayers as a peculiar favourite of the gods. We still further find the most illustrious princes, among whom were two (Krishna and Balarama) who have obtained the honour of gods, assembling to drink at a feast, and killing one another in a quarrel occasioned by too deep potations. The Pandits, it must however be observed, although they readily admit the truth of all these circumstances, do not admit the conclusions that I draw. They say, that at all times the great have taken the liberty of indulging their passions in whatever manner they please; and that in former times mankind, being infinitely greater than they are now, could with impunity indulge in illegal pleasures that the poor rogues of the present degenerate age should not presume to imagine: nor do they consider these actions as at all rendered legal by their having been done by the gods or the saints, whose doctrine they hold themselves bound to follow. They very indulgently declare, that mankind are bound by the precepts of the law, and not by the example of the lawgiver. Although it must be confessed, that in the actual practice of mankind the doctrine of the Pandits is not very unsound; yet I presume, that the christian reader will think it rather probable with me, that the sages of old, who have delivered to us these accounts of their conduct, had it been contrary to the then established law, would as usual have been somewhat more reserved in the publication not only of the frailties of their gods, who may be supposed to have broad shoulders, but even of their own infirmities, and those

of their nearest relations. I have endeavoured to estimate the number of each tribe of Hindus by the same means, that were used in Shahabad.

The Brahmans* amount, it is said, to about 70483 families, or about one-fifth of the whole population; and only one-tenth of the whole number are of the military order, which I suppose to be the remnant of the ancient Brachmanni. Of the 10 nations into which the greater part of the sacred order is now divided, the Kanojiya is by far the most numerous, and contains almost the whole of the Brahmans belonging to this class, amounting to no less than about 59,300 houses. As usual this nation has undergone many subdivisions, and the most remarkable are into Sarwariya, Sanauriya and Antarvedi. The former comprehends by far the greater part (56,360) and it is said derives its name from the country called Sarwar; which implies the country of the Sarayu; but is restricted to the country between the left bank of that river and the hills, that is to this district and a small portion of the Nawab Vazier's dominions. The term Sarwariya in the account of Shahabad was written Saryuriya, but this the people here say is incorrect. It must however be observed, that the Brahmans on both sides of Sarayu, belong to this division, and that the term Sarwariya is quite modern, being mentioned neither in the Purans nor Desmala. The Sarwariya Brahmans are exceedingly proud, and value themselves on observing the Hindu rules of purity with great strictness. On this account, although they acknowledge, that they are a branch of the Kanyakubja nation, they consider the term Kanyakubja or Kanajiya as highly offensive, especially because the Sanauriyas and Antarvedis, who are poor, do not scruple to hold the plough with their own hand; but this is here considered as altogether incompatible with the purity of good birth. Many of them, even men, who would in Bengal be degraded as acting at temples as priests, asserted to me, that they considered not only the three lower tribes, but even all other Brahmans so much their inferior, that they would not drink water from any hand but that of a Sarwariya Brahman; but the very mention of such a circumstance was so offensive to my assistants, who were of other tribes, that I could not induce them to credit the circumstance; and they stoutly denied the veracity of my informants. The whole of the Sarwariyas assume exclusively to themselves the title of Pujyaman, as being the only Brahmans, that are the legitimate objects of worship among men. The most illustrious among the Sarwariyas are divided into 19 Pangtis, of which the three highest are called Garga, Gautama, and Sandilya, pretending to be descended of these three persons, but this origin of the families (Gotras) of Hindus is exceedingly doubtful, as it is common to the Sakadwipi Brahmans, who are not descended of the sons of Brahma. The supposed descendants of Garga claim to be the highest, and are called Sukla, the Gautamiyas take the title of Misra, and the Sandilyas that of Tripathi, in the vulgar tongue pronounced Tiwari. These three Pangtis never use for their Gurus nor Purohits any person but their own relations in the male line, or their sisters son. The next 13 Pangtis, who are of equal rank among themselves, do not derive their names from their supposed ancestors, but from distinctions originally local, although the people now called after such or such a place do not reside near it. The three lowest Pangtis of the Sarwariyas also derive their names from different places. These 19 Pangtis form only about a twentieth part of the Sarwariyas. Those who remain are called Tutahas. These are no ways permitted to

* The origin of caste is still involved in so much obscurity that the whole of Dr. Buchanan's remarks on the Brahmans are given.—[ED.]

take in marriage the daughters of the Pangtis, but sometimes a Pangti accepts a great deal of money with a Tutaha girl, and reduces himself to that rank, adding however great splendour to the family, into which he marries. All the Pangtis are strict in observing the external ceremonies of religion, which many of the Tutahas neglect; but much of the learning belonging to the tribe is in possession of the Tutahas, among whom are some of the most learned Pandits. On the whole however the Sarwariyas possess much less learning than they should in proportion to their great numbers, being nine-tenths of all the sacred order, that could take Dana; for of the 95 Pandits, who profess the sciences mentioned by the Pandit of the survey, 70 only belong to this division of the Kanyakubja nation. In general the Pangtis enjoy the offices of Guru and Purohit for the higher ranks, and it is only Tutahas of great learning, that presume to interfere. Where the number of Brahmans is so enormous, only a small proportion could live by deceiving the multitude, which is the proper duty of the Brahmans, and by far the greater part, even of those employed as priests, who have not lands of their own, rent them from others, and subsist more or less by their cultivation. Where their proper profession affords them other means, the whole of the cultivation is carried on by servants; where the family has no other resource, the men, hoe, weed and water, but abstain from ploughing or reaping. Almost the only persons, who do not farm, are those, who are well endowed, or who have no stock, and must therefore live as common beggars; for they will on no account work for hire; but Sarwariyas of all ranks, who are poor, are willing to carry arms, and act as messengers. The Pangtis never act as priests in temples, nor form a part of the manorial establishments (Dihuyar); but the Tutahas, who embrace these officers, are not disgraced.

In this district no one takes the title of Antarvedi or Sanauriya, both of which are held in great contempt; but about 260 families, probably belong to one or other, and are called merely Kanojiya Brahmans, of whom one is a professor of some reputation; and 600 families are called Bagsariyas as having originally come from Bagsar, not our Buxar, but a town on the east bank of the Ganges above Allahabad. All these follow the custom of this country in abstaining from the use of the plough. It must be observed, that the province of Antarvedi, or at least the country which the Antarvedi Brahmans now occupy, is by no means confined to the space between the Yamuna and Ganges, as the name implies; but includes also the country on the left of the latter river, every where above Kara and Manikpoor, including, I believe, the whole of Lerkars, Manikpoor, Lakhnau, Khayrabad, and Bareli. The capital of the kingdom of Kanoj was therefore nearly in the centre of the province of Antarvedi, and although this name is often employed to prevent the ambiguity of using the same name for a province, and for the capital of the kingdom, yet the name Kanoj is often applied to the province, the term Antarvedi being highly objectionable, as not applicable to a half of the country.

A more numerous class, although they acknowledge Kanoj as their nation, reject the term in their name, and call themselves Yajurhota or Yujhotiya Brahmans, that is philosophers who make burnt offerings according to the forms of the Yajurveda. They are however mostly very low ignorant fellows, and trade much in cattle; but will not hold the plough. They amount to about 2000 families. A colony of Brahmans from Kanoj accompanied the Chauhan Rajputs, when Chitaur was taken by the Moslems, and seems to have been the first of the present sacred order, who obtained a permanent settlement in the northern mountains, at least near this district. Those of pure birth call themselves Upadyaya, and perhaps of these 80 families have settled here. In the hills they possess considerable learning, and live what is called a pure life. Of the Mithila

nation, although immediately adjacent only 80 families have found their way here, and they have almost all settled in Parraona, on the immediate frontier. They are respectable for learning, in this small number there being three professors.

The Brahmans of the Saraswat nation amount only to about 10 families, attached chiefly to the Khatri tribe, of which they are the proper priests. They seem originally to have held the whole country between the Yamuna and Indus, while their chief city or residence was at Patiyala on the Saraswati river, from which circumstance they derive their name; but the Gaur nation of Brahmans, having failed in obtaining a settlement in that country, the country near the Saraswati was given to them, and the Saraswati nation was confined to the western parts of its original territory called Punjab by the Muhammedans, and Pangchala by the Hindus. With their disciples the Khatris, the Saraswat Brahmans, who remain in the west, have lately become followers of Nanak, the Brahmans continuing to act as Purohits; but those here adhere to more ancient doctrines. In this district about 10 families of Gaur Brahmans, called also Hiranyas, have followed the wealthy merchants of Agroha, a great trading city in the part of the Saraswati country, where the Brahmans of Gaur obtained a permanent settlement. As the Saraswati nation has suffered severely by the doctrines of Nanak, the Gaur nation has suffered by the heresy of the Jains, a large proportion of the wealthy merchants adhering to that ancient doctrine; a great deal worse than that of Nanak, as in the north they do not use the Brahmans for Purohits.

None of the Kanoj Brahmans of Bengal nor of the Utkal nation, have obtained a settlement in this district; and of the five southern nations there are not above five houses of Maharashtra Brahmans, one of whom is spiritual guide for a lady of high rank, another is a copier of English accompts. Of the Brahmans, who do not belong to any of the 10 nations, and who still would be thought to belong to the sacred rank, by far the most distinguished, and also the most numerous, are the Magas of Sakadwip, who may amount to 3340 houses. In proportion to their number they are more learned than the Sarwariyas, 21 of them professing to teach science; but they are not received as Purohits by any persons of high rank. They are much consulted as astrologers, soothsayers, and wise men, (physicians) and are also employed to read and explain the legends. Like the Sarwariyas however they almost all have farms. Some of them are called Sumanggalis from an hereditary office, which some families enjoy. They are not disgraced by the office.

Next in rank to these Brahmans, all of whom, whatever the pride of individuals on their own dung-hills may assert, seem to have an equal claim to belong to the sacred order, the military Brahmans (Bhumihar or Bhungihar) are generally admitted to hold the next rank; although they cannot receive Dana, nor perform any office of the priesthood. Many Pandits allow, that they are entitled to all other privileges of the sacred tribe, especially to receive the whole of the mysterious Gayatri, and consider the putting them to death on any account as totally illegal; but many persons, especially the Rajputs, speak of them with great contempt, and are disposed to deny them altogether the title of Brahman, alleging that they were impure infidels, who held indeed all the lands of the district, of which on account of their beastly customs they were justly deprived by the pure followers of the law. The prevailing tribe was the Domkatar, often already mentioned, and I have little doubt, that the Rajputs are right with regard to their original impurity, that is to say, that the rules of purity had not been introduced, when this tribe first assumed the name of Brahman. It must be observed, that some of the Bhumihars, here as well as in Bhagulpoor, have assumed the rank of Rajputs in preference to that

of Brahman; owing probably, as I have said to the uncertainty, which once subsisted in the popular opinion concerning the rank, which the sacred and military professions should bear. The military Brahmans amount to about 7022 families, and live exactly like Rajputs, but none here condescend to hold the plough.

The Bawonas or trading Brahmans in many districts, as Puraniya, would seem to be included among the Bhumihars; but here, on account of their degrading profession, and their loading the sacred beast, they are not admitted to that honour, and derive their name from consisting of 52 subdivisions. Their whole number may be rather less than 220 families, of whom 120 or 130 may trade. Some pure Brahmans are merchants, but do not degrade themselves by loading the sacred ox. The priests called Kantaha, Karathaha, or Mahapatra, although they perform some very solemn ceremonies for all ranks, and receive Dana on the occasion, are reckoned still more impure than the military or even the mercantile tribe; and no decent person will drink water from their hand. They have multiplied like their betters far beyond what the gains of their profession will support, and are mostly farmers, but will not touch the plough. They may amount to 300 families. Still lower in public estimation, but yet admitted to be Brahmans, are the Jyoshis, Satiputras, Bhangrariyas, or Dakatiyas (robbers), who should live by cheating the lowest of the vulgar, and they in fact do all, that they can, in the way of their calling; but most of them must labour, although even they scorn the plough. They may amount to about 170 families. It is alleged that these Brahmans are descended of Varaha Mihira. This great man discovered by his skill in astrology; that, if he begat a son a certain day, the child would be a profound adept in the truths of this science. He accordingly set out with an intention of meeting his wife at the proper time, but could not arrive by that day. Being unwilling however to lose such an opportunity of favouring the world, the gymnosophist mentioned the case to the wife of a cow keeper with whom he lodged on the way, and the good woman rejoiced in receiving from the philosopher the embraces, that were destined to produce Bhadra, the celebrated ancestor of the Jyoshi tribe. This person composed some works on the science of astrology in the vulgar language, and foretold, before Bhoj Raja was born, the great authority, which that prince would acquire. Mungja, the uncle of the young prince, being jealous, ordered him, when born, to be exposed in a wild, where it was for some time supposed, that he had perished; but he had been preserved by a Brahman, who after educating him reconciled him to his uncle. The Jyoshis or Satiputras may be occasionally seen in Bengal, travelling about besmeared with red lead and oil. As an example of their art I shall mention how one of them extracted half a rupee from my chief assistant. On the way from one stage to another the Jyoshi entered into a conversation with the Pandit of the survey, and learned a great many particulars concerning my assistant's history, especially the names of his family. He then left the Pandit, and meeting his man, as if by chance, began, as he approached, to bawl out his genealogy, which a good deal surprised my assistant, we being in a part of the country, where he was totally unknown. The fellow then mentioned all the circumstances, which he had learned from the Pandit, intermixing them with prophecies of success to the assistant's children, and thus procured the money. His previous interview with the Pandit was not discovered until some days afterwards, and then by mere chance.

Twenty-six houses of Brahmans, but of what kind is not known, have suffered disgrace by making ear-rings of palm leaves, and are excluded from intermarriage with others; still however they are entitled to receive the whole Gayatri, and should be exempt from capital punishment. Ex-

cept those who have studied the sciences, or who act as priests, almost all the Brahmans would be willing to carry arms in irregular warfare; and, when the Rajas were in the habit of fighting, the Brahmans often joined them. Some of them (500) are merchants, which next to arms is considered as the most honourable profession. In this district they disdain the use of the pen as much as the plough, nor have they entered into the law or revenue departments, but almost all have farms, and one family makes the glass ornaments worn on women's foreheads. These are all that are here admitted to be Brahmans, and the Kathaks or musicians, who in Shahabad were thrust among the Kanojiya Brahmans, are here altogether excluded from the dignity of the sacred order, although it is not pretended, that they or the Bhats (parasites) belong to any other, and they are permitted to receive the whole of Gayatri, while their death is very little less sinful, than that of a Brahman would be. It is alleged, that these two castes were created at the request of Prithu, one of the kings descended of Swayambhuwa, who governed India in the golden age, and they are both admitted to be higher than Rajputs. The Kathaks in all amount, it is said, to 54 houses, all of whom sing, and perform on musical instruments; and five of them rear up their boys to dance dressed like girls. Three or four of them are said to have some knowledge of the books composed on their art. It would not appear, that they have the art of writing or expressing in characters, any air or piece of music, so that by looking at the characters any other scientific person could sing or perform it on any instrument. By far the greater part of the Kathaks live in part by farming, but they never hold the plough. They are reckoned of two kinds, Magadhas from the name of a country, and Gautamiyas from the name of a holy person; but both, the name of the country and the person are vastly more modern than Prithu, nor did I learn, how such terms came to be applied to this caste.

The Bhats, the other tribe formed at the request of Prithu, amount to about 560 families, exclusive of those, who have adopted the Muhammedan faith. They are on the same footing with these apostates. Of both perhaps 32 families have become chintz makers. Those who are reckoned to belong to the second or military caste (Kshatriyas), and who receive two-thirds of the Gayatri, amount to 38218 families. Of these 47 families are Khatris, originally from the Punjab. In their native country they still retain the same military character, that they did in the days of Alexander, and their chiefs are said to unite the spiritual to the temporal power, each being considered as the head of religion in his own town or petty state, the authority of the Brahmans being confined to the performance of ceremonies. In this country they have abandoned the use of arms, and are either merchants or employed in the collection of the revenue. They allege, that this has been the case ever since the time of Toral Mal, who in the time of Akbur was the principal chief of the tribe. He having been placed at the head of the revenue department in the Mogul empire, introduced many of his vassals as subordinates in office; and they say, that the king ordered, that all these should resign the sword, and become penmen. It is the descendants of these, that have now spread into almost every city of the east, and south of India, as bankers, merchants, and revenue officers; and few of these have adopted the doctrine of Nanak, but either adhere to the worship of Vishnu, or are infected by the heresy of the Jains. They pretend to be of higher rank than the Rajputs, and allege as a proof, that on a certain public occasion Toral Mal offered part of his food to the Brahman, who was his spiritual guide, and who readily partook, while the crafty chief called on Man Singha, a Rajput of the same rank in the empire, to make a similar offer to his sage. Man Singha knowing that his offer would be rejected with scorn, declined, on which

Toral Mal claimed a superiority of rank. This it must be observed, is the story of the Khatris, which in all probability would be entirely denied by the descendants of Man Singha.

In the train of the Palpa Rajas at Gorukhpoor, and on his estate in Nichlaul, are several persons of the mountain tribe called Khatri, who are a spurious race, as will be mentioned in the appendix; but who claim all the dignities of the military order. The Rajput are here, every where, and by all ranks, admitted to be Kshatris, although they claim all manner of descents, except from the persons, who according to the Vedas sprang from the arms of Brahma. Indeed the whole of this manner of accounting for the origin of castes is so contrary to other legends, that some of the Pandits, who are most determined defenders of the Vedas, give it in reality up, by alleging, that the four castes thus created did not procreate, and lasted only for their natural lives; and that the castes, which now exist, arose by subsequent creations; but in abandoning this story care has been taken to approach no nearer the abomination of reason; and many of these creations will be found still more difficult, than that which has been relinquished.

I have not been able to form any estimate of the number in each of the numerous tribes, into which the Rajputs of this district are divided; but shall state whatever I learned concerning their origin. Those reckoned of the highest rank here are the Sirnets, Visens, and the Suryabangsis of Mahauli; next to these are the Kausikas, Gautamiyas, and the Suryabangsis of Amorha; but these distinctions rather refer to the purity and power of certain families, than to any other circumstances: for very few families have preserved themselves free from intermixture, the soldier being apt to please himself with beauty, in whatever rank it is found; and, if a man be poor, let his purity be what it may, few will sing in its praise. Although this district was the original seat of the Suryabangsi tribe, no Rajput here pretends that his ancestors have remained in the district ever since the time of that family's government; but in the territories of the Nawab Vazir, near Ayodhiya, are many families, who allege that they have continued to possess their lands without interruption. The Suryabangsis of Amorha, came from thence; but still are reckoned inferior in dignity to those of Mahauli, who obtained possessions in this district more early. Descended from the Suryabangsis of Amorha, is a tribe of Rajputs called Nagamali Kungyar, whose mothers were of low birth.

The Raja of Mahauli says, that he is of the same family with the Jayanagar Raja, descended of Bharata, the brother of Ramachandra. This prince, after Rama assumed the government of Ayodhya, went to assist Yuddhajit, his mother's brother, king of Kekaya, against the Gandharbas, who had invaded the country. Having expelled these, he built two cities, of which one was Srinagar, and left there his two sons, Taksha and Puskal. According to the Des-mala of the Saktisanggam Tantra, Kekaya is situated between the Brahmaputra river and Kamrup, that is to say, it is the country we call Bhootan; which, in Sangskrita, is otherwise called Salya; but I am told, that Valmiki considers Kekaya as the same with Kasmira. However such discordancies may be reconciled, many pretend that Srinagar, near the source of the Ganges, is the city built by Bharata, and that the Suryabangsis of Mahauli, came from Kumau, in that vicinity. If these assertions were well founded, we might assert that the mother of Bharata was not of the Hindu, but of the Chinese race, and that the Rajputs descended of Bharata, lived in all the impure customs of the mountaineers, until they returned into the plains of Hindustan; for there is no reason to think, that the doctrines of purity were introduced among the mountaineers until the fugitives from Chitaur took possession of the

middle parts of these mountains, nor have they ever atached the Kekaya of the Des-mala, where the people continue in primitive impurity. This account, it must be observed, strongly confirms the pretension of the Tharus to be descended of the family of the sun. The Mahauli chief, however, alleges, that the Kumau, from which his ancestors came, is in the vicinity of Jayanagar, which I consider as the most probable opinion, especially as there is strong reason to think, that the Srinagar of the mountains near the source of the Ganges was founded by Mahipat Sa Raja of Gaharwal, in the reign of Akbur. The Rajputs of Jayanagar have now given up the title of Suryabangsa, which is claimed by every impure chief, that assumes the title of a Kshatri, and call themselves Raghubangsis and Kachhoyahas. This hard title was bestowed on the Jayapoor family, by some of the Muhammedan kings, long after the Suryabangsis of Mahauli had left their former seat to return to Kosala. A few families, calling themselves Raghubangsis and Kachhoyahas, are found in this district, but are of no importance.

The Sirnet Rajputs, the most numerous and powerful in this district, claim a descent in the same manner from the sons of Bharata, who were left at Srinagar, and obtained the title of Sirnet from some Muhammedan king, in whose service the chief of this tribe was. This officer was in the habit of wearing on his head a cloth of gold, named Net, and the king, not choosing to recollect the Hindu name, always called him Sirnet, or the man wearing a cloth of gold on his head. Many allege, that the Srinagar, from whence this tribe came, is that near the source of the Ganges, but the agent of the Sady, who now possesses the largest estate belonging to the family, denied this, and said that it was a Srinagar in the west of India, which I presume is that in Bandelkhanda. The Onaula Raja, however, the chief of the whole tribe, and a person of considerable learning, says, that they came from Asam, which agrees better with the idea of Bhotan having been the abode of Bharata's sons. But in the vicinity of the Srinagar of the northern hills, there is a country called Asamchhi, which the Onaula Raja may have confounded with Asam. The inhabitants are impure mountaineers, chiefly followers of the Lamas.

In this district, the Baghelas are allowed to be of more pure birth than the Sirnet, but they have no authority. The highest chiefs here, are, however, anxious to procure intermarriages with them. They are here universally reckoned Suryabangsis; but they have been traced by Abul Fazil to the family of Jayachandra, king of Kanoj; while, in this district, the Rathor tribe, descended also of Jayachandra's family, is said to be of the family of the moon. The Baghelas here, are considered as the same with those of Ringwa (Rewah R.), or Baghel Khanda, and, therefore, either Abul Fazil must be mistaken in supposing them descended of Bayiju, as I have mentioned in the account of Shahabad, or the tradition here considering Jayachandra as of the family of the moon, must be wrong.

In this district the Ujjainis or Paramarkas or Bhojpuriyas are not numerous, although they have obtained some lands by force; but it was of late only that they obtained here a footing, nor are they considered as on an equality with the six families above mentioned, although it is admitted that they are of the family of Vikrama and Bhoj, and although they call themselves of the family of the sun. The Kausikas are reckoned the highest of the Somabangsis or family of the moon, and pretend to be descended of Kusha or Kusika, whose son Gadhi built Gadhipoor or Gazipoor, nor have his descendants ever since been expelled from Kosala; but the possessions which they hold in this district were taken from the impure tribe of Bhar or Bhawar. The Raja knows his genealogy no farther than his grandfather, although it is well known that his ancestors drove out the Bhars many generations ago. He is however abundantly proud, and dis-

dains the title of Rajput, saying that he is a Somabangsi or Chandrabangsi Kshatri.

The Gautama Rajputs must be distinguished from the Gautamiyas, who are a spurious breed of the same family, but by low born mothers. They usually pretend to be descended of the orthodox Gautama, a personage created by Brahma, but who appeared on earth in the time of Rama. There is a passage, however, in the Bangsalata, which the Pundit of the survey thinks to imply, that this tribe is descended of the Gautama of the Buddhists, if the two persons be different. The Gautama of the orthodox married a princess of the family of the moon (Ahalya, the daughter of Mudgal), but in the Bangsalata it is said Gautama of the family of the moon, and Arkabandhu (friend of the sun) was a great king, and that the Rajas, his descendants, are called Gautamabangsis. It is inferred from the title Arkabandhu that he was of the sect of Buddha, this being one of the titles given to Gautama in the Amarkosh. I always before understood that Gautama or Sakya was the prince of the latter name in the family of the sun, and in the genealogy of the family of the moon, even in the Bangsalata no such person as Gautama is mentioned, and I suspect, that the only connection of Gautama with the family of the moon was by his marriage. There is also much doubt concerning Sakya and Gautama being the same, although it was confidently asserted to me in Behar. The Gautama Rajputs are still numerous on both sides of the Yamuna near the lower part of its course, and are said to have been once lords of the country now called Bundelkhanda.

The Chandel Rajputs are here admitted to be Somabangsis, but are not allowed to marry the daughters of the principal tribes, although in the hilly country south from the Ganges and Yamuna, and in the country between these rivers, they still possess large territories. Their name is said to be a corruption from Chandara, a large estate south from Kalpi, which they long ago possessed, and left to a spurious breed by slave girls, who are called the Bundela Rajputs, and have communicated their name to a large country, now called Bundelkhanda.

The Raythaur, Rayathor or Rathor tribe, which gave the last Hindu monarch to India, is here, as I have said, considered as belonging to the Somabangsa. Those here are considered as low, and are not admitted to the honour of marrying daughters of the higher tribes; but these haughty gentry would have no scruple in giving their daughters to the Rathors of Marowar, who have preserved their purity. The Maharori Rajputs, who are also low, are here considered as quite different from the Rathors; and, if they derive their name from Marowar, are probably of the tribe which was expelled from thence by the Rathors. The Gaharwar Rajputs are called Somabangsis, and all the highest families are willing to give them their daughters in marriage. They are considered as descended of the Kasi Rajas, who once held a part of this district; but the only authority for such an opinion is, that the Gaharwars were the last Hindu Rajas of Benares, although there is not the slightest reason to suppose them descended of its ancient kings; on the contrary I was there assured, that, when the Muhammedans took the town, there had been only three chiefs of that tribe, Chitra Sen, Buddha Sen, and Raja Banar, who communicated his name to the town. I was however also assured, that they claim a descent from a Nala Raja, and in the family of the moon there was a chief of that name, who was king of Antarveda. The Gaharwars came to Kasi from Narawar, a town west from Goyaliyar (Narwah R.); and they still possess by far the greatest part of the country between that and Kasi on the south side of the Ganges at least, but they have long been expelled from Kasi, the vicinity of which belongs now chiefly to the Raghubangsi

tribe, and it is probable, that it was when driven from thence, that the Gaharwars came to this district, where they hold no considerable estate. The statement usually given here of the descent of the Gaharwars from the ancient kings of Kasi is, that Baladeva Raja of that city was expelled by a violent king of Magadha, and entered into the service of Tripura king of Kasmira, from whom he contrived to seize the government of that country. His descendants enjoyed this for 121 generations, and his son, Aridal Dalan, took the title of Bhumandalesa or lord of the extent of the earth. After having governed Kasmira so long, the family was attacked by the kings of Rum, Turk and Iran, when Chhatrapati Udayabhan retired to Kanoj, where his descendants were kings for 50 generations to Raja Jayachandra. This prince had three sons. The first, named Lakhun, was killed with his father in vainly opposing the Muhammedans. The second son, named Ramadeva, retired to the southern part of the empire, and his descendants are chiefs of the Rathors of Marowar. The third son was Banar Raja of Kasi, ancestor of the Gaharwar chiefs. So far as relates to the ancestors of Jayachandra at Kanoj this story is certainly not true, as we know, that either Jayachandra, or his father at farthest, had taken that city from the Tomara tribe, who had held it and the sovereignty of the Gangetic provinces from the time of Bhoja of Daranagar. What follows Jayachandra respecting his sons may be true, although it contradicts both the accounts which I received at Benares, and the account given by Abul Fazil. If it were true, the Rathor and Gaharwar Rajputs should be of the same family; and, if the claim of the Rathors to be of the family of the moon rests on no better foundation, it is very little worth. The two tribes are however now considered perfectly distinct, as they intermarry.

So far as I learned, these are all the tribes who claim to be descended of the families of the sun and moon; and it must be observed, that the claim of most of them rests on the most dubious foundations. Many Brahmans allege, that no other families have any pretension to be called Kshatriyas, but here this doctrine is not held sound, and no Rajputs are reckoned higher or purer Kshatriyas than the Visens, who like the families of the sun and moon claim to be descended of Brahmans, but not from Atri nor Marichi, the ancestors of the two illustrious houses. The Visens, who next to the Sirnets, are the most powerful tribe here, claim to be descended of Bhrigu, by some supposed to have been one of the colony of Brahmans, who settled in India at the end of the golden age; and, although this is denied by others, he is allowed in all the Purans to have been created by Brahma, or in other words, that he came into the world the lord knows how. As however it will be found, that scarcely any of the things received as generally admitted opinions are in reality such, so this also is doubted, and in the Bangsalata the genealogy of Bhrigu is given from Atri and Soma. His descendants Sukra, Richika, and Jamadagni were all Rishis or holy persons like himself. Parasu Rama, the son of Jamadagni, without giving up the title of Brahman, was a great conqueror; but his descendants until Mayura-Bhatta were entirely given to religion. What number of generations existed between Mayura and Parasu Rama is not mentioned, although there is not probably room for many, if the genealogy of the chiefs of his family be correct, as this states above 100 generations. The son of Mayura Bhatta took the title of Kshatri, that is betook himself to arms, and the family until the English government continued to have recourse to these for its defence, and with some success, as they not only retain large possessions in the neighbourhood of Bhagulpour, the ancient family seat of Bhrigu; but have a large settlement at Gongra or Gongda, in the territory still belonging to the Vazir, and are also numerous in the western districts ceded by that prince to the Company. In all quarters, however, their possessions were lately more exten-

sive than at present they are. The Gongra, and other neighbouring chiefs of this tribe, are not reckoned of so pure a birth as those residing near the ancient seat of the family, because they succeeded to their estates partly by a marriage with a daughter of the Kalahangsa chief, and partly in consequence of having been adopted by the Bandhulgotiyas, as will be afterwards mentioned. There are other branches of the Visens called Chauwariyas and Nayapariyas; but these are pure descendants of the eastern branch of the family.

In the account of Shahabad I have mentioned the Nagbangsi Rajputs, as being the remnants of the Cheros, once the kings of at least the Gangetic provinces; and, although these were of an impure tribe, it has been mentioned, that the chief of the Nagbangsis, the Raja of Nagpoor, who no doubt is a Chero, as most of his vassals are, is allowed to be a pure Rajput, and claims a descent from the great dragon, who governs the infernal regions. There are in this district a good many Nagbangsis, some of whom call themselves merely by that name, while others call themselves Vayasas, a name which in the account of Shahabad has been written Vais. The Vayasas or Vais, however, universally admit that they are Nagbangsis, and that they assumed the name of Vayasa from Vayasawara, a town between Lakhnau and the Ganges, where they were long settled, and from whence they came to this district some generations ago, in consequence of a famine. Some of these, with whom I conversed, agreed with the account, which I received in Shahabad, and looked upon themselves as descended of the great dragon, and as such claimed a superiority over all other Rajputs, the old dragon being a personage of a good deal more consequence than the Rishis, from whom the others claim a descent. They said, and perhaps believed, that should a serpent, from ignorance or mistake, bite one of them, the poison would do them no injury; but I had no opportunity of putting their faith to the trial, that was proposed by the chief of Nagpoor. Other Vayasas, however, altogether disclaimed this extraction, and gave one fully as difficult of belief. There was, they say, a certain very holy person named Vasishtha, well known to all Hindu scholars, who had a cow known to all, and named Kamdhenu. This was a very precious animal, which was coveted by Viswamitra, king of Gadhipoor, who threatened to take her by force. Vasishtha was much afflicted at this, and Kamdhenu seeing his grief, asked him if he meant to part with her. To this he replied, that he had no wish of the kind, but had no power to resist the king, on which a number of warriors instantly sprung from the cow, overthrew Viswamitra, and having killed most of his armies and children, reduced him to become a Brahman, in which character he became an eminent saint. On this occasion the Singhar Rajputs sprung from the horns of the cow, the Haras from her bones, the Kachhoyahas from her thighs, the Chandels from between her horns, and the Tilakchandras from the root of her nose. The great king Shalivahan was of this last tribe, and having had 360 wives, was ancestor of many Rajputs, among whom are the Vayasas, who derive their name from Vayasawara as above mentioned. Many of the tribes mentioned in this account, as I have already had occasion to state, deny the honour of a descent from this cow, and the story is said to be stated in the sacred writings with considerable differences. Some Pandits said, that the circumstances respecting Kamdhenu are mentioned in the Mahabharat; but the legend mentions only that soldiers (Sena) sprang from that beast, nor is there the least hint given of her offspring being the ancestors of any of the Kshatriya tribes. The story is also said to be mentioned in the Ramayan of Valmiki, but the issue of the cow is there stated to have consisted of barbarians (Mlechhas), such as Barbaras, Sakas, Yavans, Kambojas, and Khas. As the Cheros or old Nagbangsis were no doubt Mlechhas, this may be considered as including

them; but few Hindus will admit, that Shalivahan was a Mlechha. Whether or not the Vayasas are descended from him, I must leave for future examination, and proceed to state the reason assigned by those, who claim a descent from the cow, for their being called Nagbangsis. They say that a child of a Tilakchandra was in the habit of feeding daily with milk a serpent, which he found in a wood. After some time the serpent was highly pleased, and told the child to call all his descendants Nagbangsis; and that he would make him a great Raja, which accordingly happened. This is rather a lame story; and whether the following is more or less so, I shall leave to the reader's judgment. Bhim was one day poisoned by his cousin Duryodhan, and the body thrown into the river. It so happened, that in that vicinity the daughter of a dragon had long been in the habits of praying to Siva, and was a great favourite; but on that day she had offered flowers that were rather decayed; on which the irascible god cursed her, and declared that she should have a corpse for a husband. The afflicted damsel, for the dragons of the lower world, both male and female, have human shape whenever they please, went to Siva's spouse, and told her the hard sentence. On this the goddess upbraided her husband for bestowing so severe a punishment on so trifling an offence. It was therefore agreed, that Bhim should be restored to life after the fair dragon had married his body, and he had by her a numerous offspring. The Nagbangsi Rajputs, in the female line, are thus descended of the devil, and, if Bhim's mother had been what she ought, might by the father's side have been descended of the moon; but the good man Pandu had nothing to do in the matter, and the lady his wife had Bhim to the god of wind. This, I am told, is the story, which the Nagpoor Raja wishes to be believed, and he probably thinks, that the bar of bastardy so long ago, and in such circumstances, is no great blot on his scutcheon. In this district this tribe is very numerous, but have chiefly come lately from the west, and possess no considerable estates, so that no family can be traced to the time, when the Cheros, their real ancestors, held the country.

There are in this district a few families of the Hara Rajputs, who possess small estates, but none of them has the title of Raja. They are, however, esteemed of the highest birth, the Ranas, the Rathors, the Kachhoyahas, and Haras being the four great families of the Ajmir province, considered as the proper country of the Rajput tribe. The Haras must be therefore of the Jodhapoor tribe, which was compelled to give several daughters in marriage to the Mogul emperors. The account given by the register of the country possessed by the Kalahangsas, if true, shows, that even in very modern times the sacred tribe have assumed the title of Kshatris, and are commonly received as such. There was a Raja of the Domkatar tribe of military Brahmans, who took into his service, as steward (Dewan), a scribe, who came from the country west of Delhi, and soon after was joined by a Brahman, his family Purohit. This person had a very handsome daughter, whom the Raja insisted on marrying; but the priest who claimed a descent from Anggira, one of the Brahmadikas, scorned such a base alliance; and induced his friend the scribe to assist him in shunning the degradation. Both pretended to be perfectly satisfied with the alliance, and asked for 4 or 5000 rupees to enable the Brahman to procure a house suitable for the occasion. The money was readily given by the amorous and unsuspecting chief, a strong house was built, and 500 Rajputs were secretly engaged. On the marriage day, the food and liquors were poisoned, and given to the attendants of the Domkatar, while the Raja and his kinsmen, about 40 in number, were murdered by the Rajputs. The murderers issuing, found the Domkatar soldiers in the agonies of death, and spreading over the country seized the forts, and put the base-born women and children to death. The scribe was at first made

Raja; but his rank was found too low, and the priest accepted the office. The register (Kanungoe), who gave this account is descended of the scribe. The chiefs descended of the worthy priest, who was ancestor of the Kalahangsas, acknowledged their descent from Anggira, and their having come from Gahamuj Badam, a place west from Delhi; but say, that they received an order from the king of that city to take possession of the country. Kalahangsa signifies a profound goose, but no explanation is given why this tribe should have assumed so strange a title. It must however be observed, that among the natives the goose is not reckoned an idiot. The Visens have obtained a great part of the Kalahangsa estates by marriage; but in this district there still remain two chiefs, who have the title of Raja. They are considered as a low tribe.

The Chauhan Rajputs have been mentioned at some length in the account of Shahabad, but I must now mention, that here they are alleged to be descended from fire. A certain Raja of Chitaur had no son; but having made a burnt offering, with very numerous and expensive ceremonies, a child issued from the flames, was adopted by the Raja, and is ancestor of the Chauhan tribe, or at least of their chiefs; but every person of a tribe, as usual, claims a descent from the chief's ancestors. Pithaura, last king of Delhi, was of this tribe, and a collateral branch of the Chitaur family, and on his death the Delhi family divided into two branches. His son Karan retired into the Duabeh or Antarved, and his great grandson Sumeru built Itaya, where his descendants for several generations seem to have been very powerful, and the chief of the family has still some estates, while many of the tribe live in the vicinity. It must, however, be observed, that the Palpa family, to which the northern parts of this district belong, and who are generally received as the descendants of the Chitaur Rajas, do not acknowledge this descent from the fire; but pretend to be descended from the family of the sun. Their ancestors first resided at Ajmir, where Ajaya Pala was contemporary with Bhoja of Daranagar. He was killed by the Muhammedans, who took Ajmir, but his family retired to Susodhiya, and from thence to Chitaur. According to a manuscript account, said to have been composed by Rana Bahadur Sen, second son of Mahadatta Sen, Raja of Palpa, there were 12 Rajas of Chitaur, the first of whom, Ratna Sen had four sons Nag Sen, Kamal Sen, Manohar Sen, and Zalem Sen; but Samar Bahadur, brother of Rana Bahadur, alleges, that Ratna Sen was the last Raja of Chitaur, and that, on the taking of that city, his four sons retired to four different countries. This account I think the most probable. The Chauhans of this district are descended of Nag Sen the eldest son, who settled in the northern parts of this district, where they still have possessions, but are looked upon as rather low, having had frequent intermarriages with the impure tribes of mountaineers, so that several of them have perfectly Tartar or Chinese faces. A brother of Nag Sens, according to family tradition, went to Kot Kangra among the hills of the Punjab, and I believe his descendants still hold the place, although disputes have arisen between the Gorkhalese and Ran Jit Singha, concerning who should take it into their protection. Another brother went to the south, and I believe is ancestor of the Setara Raja. The youngest brother settled at Udayapoor, where his descendants remain with the title of Rana, and are reckoned among the very best of the Rajputs. According to this account the Chauhans should be the same with the Chitpawana tribe of Major Wilford, mentioned in the account of Shahabad; and in fact Chauhan is not a Sangskrita word, and probably is a corruption of Chitpawana, which signifies of pure spirit; but I am assured, that Amrita Rawa a great Maharashtra chief, now at Benares, and of the Pesoyas family, is of the Chitpawana tribe. He is, however, even at the holy city, acknowledged as a Brahman, although not of any of the 10 na-

tions of the sacred order, but of those tribes which were created by Parasu Rama. The difference is perhaps not very material, and will be found only another modern instance of some branches of the same family being called Brahmans, while others are called Rajputs. The Bhadariya Rajputs come from the west bank of the Yamuna below Agra, where they are numerous and powerful; but I have learned nothing of their origin, nor have they possessed that country long; as it formerly belonged to an impure tribe named Mewa, the members of which call themselves indeed Rajputs, but indulge in many impure customs: or, as I would say, retain the customs of their ancestors.

The Rakawars are very numerous north and east from Lakhnau, but are only of inferior birth. In this district are a few of the Sakarwar tribe mentioned in the account of Shahabad, as consisting partly of military Brahmans, partly of Rajputs. Here, as well as in their original seat west from Agra, they are all reckoned as belonging to the latter caste.

In this district are some Parihar Rajputs. In the account of Shahabad I have mentioned, that those pretending to be such were in fact Bhars or Bhawars, and the same might be supposed to be the case here, where the Bhars were once lords of the country; but the Bhars here do not pretend to have any kindred with the Parihars, and the latter are not only allowed to be a pure, but a high tribe. There are still many intermixed with the Gautama Rajputs on the banks of the Yamuna below Kalpi, and these two seem to have had frequent struggles for the possession of the whole country, until the Chandels interfered and reduced the power of both; but near Baghelkhanda there is a lordship named Uchahara, which belongs to the Parihars, and is in some measure independent. The high families here, however, will not give them their daughters in marriage.

The Bandhulgotiyas, who have been succeeded in their estates in the western parts of this district by the Visens, seem originally to have come from the country between the Ganges and Lakhnau towards Kanpoor, where they are said to be still numerous. They are considered as rather of low birth. There are a few Rajputs of the Tomara tribe called Tongyar in the vulgar dialect. Although the last Hindu kings of any note belonged to this tribe, it is not considered as of high rank. These princes were indeed abominable heretics.

The Kinawars, numerous and high in the Bhagulpoor district, are here held in little estimation, and their number is small. There are here some Bhungihar Rajputs, who are probably of the same origin with the Bhungihar Brahmans, some on becoming pure livers, having taken the former, and some the latter title. Many people indeed here refuse both titles to this tribe, and call the members merely Bhungihars, as is usually done in the Bhagulpoor district. The Barhiya Rajputs are not numerous on the northern side of the Sarayu; but there are said to be many near Kopa, in the southern part of the district. They are but a low race.

The Pandit heard also of the following tribes, none of them numerous, and here all considered low, nor could I learn anything concerning either their origin, or the reason of their names, which are Chamargaur, Dikshit, Palawa, Suruwar, Paharor, Sirmaur, Kakand, Methiya, Kathariya or Katholiya, Naroni, Donawar, Ghatawar, Gargabangsi, Dhenungiya, Gajarauliha, Bhalesultan, Solangki, Thapachhatri, Chakarwar, Tetiha, Chaubiya, Kusbhamaliya, Belghatiya, Pachastariya, and Surrahaniya. The Dhenungiyas are probably the same with the Vayasas, so called on account of their descent from the cow.

By far the greater part of the Rajputs follow sages of the sacred order, 12 per cent. however, may adhere to the Ramanandis, and 8 per cent. to the Atithis. Except the followers of the Ramanandis they eat animal

food, when they can procure it; but all have abandoned the flesh of the wild hog, although it is remembered, that the lower tribes of them were in the habit of eating this game. None of them acknowledge that they drink spirituous liqour. Very few will condescend to hold the plough. The men of high birth make money by marrying the daughters of rich chiefs of inferior rank; but they are in great trouble how to dispose of their daughters, because they will not on any account give them to persons of lower rank, and most of the higher rank wishing to marry low girls with large fortunes, there is the utmost difficulty in procuring husbands for their daughters. Hence, as it was not expected that the daughters, if unmarried, would be able to live chaste, but would bring disgrace on the family, it was judged prudent by the Amorha Suryabangsis, the Gautamas, the Haras, and the Vayasas to breed few or no daughters; but to put them to death when born. This formerly was done openly as a matter of course, in which no one had a right to interfere. Since the English government, they have often sent their wives to be delivered in the Nawab's country, or they have starved the infants, and said that they died of disease. Another strange circumstance contributed to this barbarous custom. Among these haughty soldiers, the title of father-in-law (Swasur) is held highly contemptuous, and a Rajput would hold it perfectly justifiable to cut down any one who applied it to him. The Sirnets, Visens, and other high castes, which have not adopted this barbarous custom respecting their female children, are held very necessitous by procuring matches of suitable rank, and their girls are often married to persons, who, though of high birth, are very unable to support them in the splendour of rank. All the Rajputs are willing to carry guns; but they seldom are willing to submit to discipline, and the higher tribes would not admit of any restriction on their dress or customs. Some few (64 families) are traders. Although some men of rank understand accompts, they do not enter into any revenue service, except superintending the estates of their chief, nor do they follow the law.

All the Baniyas here are reckoned Vaisyas, or as belonging to the third Hindu caste, while the Kayasthas are here reckoned only Sudras. This of course gives great offence to the scribes, who since the Company's government have naturally risen into great authority, and in the reports, which these people gave, and my people having similar prejudices, took, only the Agarwala Baniyas were admitted among the gentry; but this, although adopted in the tables, I am assured by the Pandits of the district is not fair, and the whole Baniyas are here considered as entitled to the appellation of Ashraf; and I have no doubt, that the same is the case in Shahabad, where from similar causes I have been misled. The Agarwalas amounting to 104 families are the highest; next to these are the Barnawars, amounting to about 280 houses, and the Unayi, amounting to about 170 houses. The remaining tribes are rather impure, and nearly of the same rank; the Agarharis amounting to about 530 houses, the Kasongdhan to 1,410, the Jaunpuris to 24, the Kamulpuri to

about 30, the Runiwars to 476, the Kasoranis to 24, the Rastogis to 4, the Kamul Kalas to 32, and the Bayas to 30. The two first ranks do not permit their widows to marry, and observe the rules which Vaisyas ought to do. On this account, such of them, as are orthodox, are permitted to learn one-half of the Gayatri, from which all the lower tribes are totally excluded. The others keep widows as concubines. Being rich, a struggle has taken place for the guidance of their spirituals. The Brahmans have retained about a half; but a large proportion of the Agarwalas, who are the richest, are heretical Srawaks. The remaining half is divided among the Ramanandis, Atithis, Kavirpanth, Nanak, Satyanamipanth, &c. In the account of Behar I have supposed, that the Agarwalas came from Agra; but this I find, is a mistake. They came from a city called Agroha (Agarowda or Agaroa, Renell's Memoir, map at p. 65), where there was formerly a great deal of wealth and trade. It is said, that when any house there failed, each of the others contributed a brick and five rupees, which formed a stock sufficient to enable the bankrupt to re-commence trade with advantage.

In this district the Halwais or confectioners, are reckoned nearly of the same rank with the Baniyas, being inferior to the two highest ranks, and higher than the more impure merchants, although they keep widows as concubines; but all ranks except the Sarwariya Brahmans, eat the confections which they prepare. Their spiritual guides, if they are of the sacred order, are the Pandits; but many adhere to the Ramanandis, Atithis, &c. Their Purohits are pure Brahmans. They may amount to 336 families, of which 70 are merchants, and 7 are sugar boilers.

In Gorukhpoor the Kandus are reckoned among the Vaisyas, although a great part of them are mere farmers, nor do their women parch grain; but many keep shops, and the term Vaisya here seems merely to imply merchant, and is almost unconnected with caste. The Kandus are considered as on a par with the lower Baniyas. One half of them have Brahman Gurus, the others are of all the sects which the Baniyas follow. Their Purohits are pure Brahmans. Their widows become concubines, but they abstain from drinking liquor in public, and Rajputs do not scruple to drink their water, although they eat the wild hog. In all there may be

2,124 families, of which about 1,623 are mere farmers, 447 are traders, and 24 are artists. By far the greatest part, above 1,600 families, are called Madhyadesis, from having belonged to the central kingdom of the world, in which this district was included. The remainder is divided among the Kanojiyas, Gongr, and Changchara, the last the smallest in number.

The Sudras here are usually divided into four classes, in the following order, the Satsudra, Sudra, Mahasudra, and Antyaja; but the people, who assisted me in making up this account, could not with certainty refer each caste to its class; for they never had bestowed pains to enquire concerning the various claims of such low persons.

The Pandits here insist, that the Kayasthas are mere Sudras, and that they are lower than the Kandus; but on account of their influence they are included among the gentry (Ashraf). All who have been long settled in this district live pure, and are endeavouring all they can to elevate themselves from the dregs of the people; but this has as yet failed of success, as many of their kindred from other countries, who come here, still adhere to their impurity, and sit on the same mat with the pure men of this district. This impurity consists in drinking spirituous liquors, and in eating meat killed by a butcher. They do not keep widows as concubines. The highest Brahmans will not eat in their house, and the sweat-meats which they offer, even to the lower Brahmans, must not pass through their hands, and must be conveyed by a Brahman; but a Brahman admits them without scruple to sit on the same mat with him, which he will not do to any individual of a lower tribe, who does not happen to be rich or powerful. None of them here will touch the plough; but they have been highly favoured in obtaining their lands, the rents having in general been at the disposal of their kinsmen. There are, it is said, of this caste 10,804 families, of whom almost the whole are of the Sribastavs tribe. Perhaps 100 families of these are called Khara Sribastav, and pretend to be the only true Sribastav, alleging that the others, who are called simply Sribastavs are bastards, a compliment returned to the Kharas by the multitude. Many of the Sribastavs descended of some families who accompanied the Sirnets from the west, call themselves Pangre, and are generally

allowed to be higher than the others. There may be 10 families of Gaur Kayasthas, 15 of Etanaks, two of Bhattanagar, and about ten who are avowedly bastards (Krishnapakshis). Almost all the Kayasthas have farms, and as many as can find employment use the pen in the revenue and judicial departments; for almost the whole ($\frac{15}{16}$) can read and write, and many understand Persian. A few are traders, and a few carry arms in the police and revenue departments, for here the civil officers are armed.

The Ahirs in this country are reckoned next in rank to the Kayasthas. A few, as has been mentioned, have become Muhammedans, but the number remaining pagan is very great. Their proper duty is to tend cattle, and prepare milk; but by far the greater part now hold the plough, although they are in the exclusive possession of the professions belonging to their caste: that is to say, no one except them is hired to tend cattle, although the infirm of poor families tend their own herds; and they here possess the exclusive right of milking the cow, so that on all occasions, for this purpose an Ahir must be hired, even by the low tribes. All people, however, may prepare the cow's milk, and may milk the buffalo. A few of the Ahirs deal in cattle, but as partners with Brahman. Some of them also are armed men in the service of the police; and cattle stealers are usually suspected to belong to this tribe. When the Rajas had feuds, the Ahirs were usually employed to plunder. The Rajput chiefs have certain families of the Ahirs, the women of which serve as wet nurses for their children, and the men are attached to their persons. These families are called Bargahas, have received of course great favour, and several of them are very rich; but the others look down on them, as having admitted their women to too great familiarity with the chiefs. The Ahirs are also much employed to show game, as they are well acquainted with the forests. Many are employed as carters, in bringing timber from the woods, a few are engaged in trade. They are reckoned a pure tribe; but even Kayasthas will not drink water from their house, although any Brahman will employ them to carry his vessels filled with water. On the day of the Dewali, they eat tame pork; and on all occasions, such as are not of the sect of Vishnu, eat the wild hog. Their Purohits are pure Brahmans, and most

of their sages belong to the sacred order; but some follow the Ramanandis, some the Atithis, and a few Kavir. There are no sages called Jhunukiyas, such as mentioned in the account of Behar. There are, however, some people called Jungkaha, who sing and beat drums at births and marriages. In all there may be 27,877 pagan families, of whom about 70 per cent. are Goyar, or Goyal, 26 per cent. are Harhoras, and 4 per cent. are Kanojiyas. The first are the highest, and the last the lowest, being by all admitted to drink spirituous liquors, while the people of this country deny that the others permit themselves this indulgence, which would deprive them of their services; but the Pandit of the survey alleges, that even the highest of them told him, that they were in the habit of drinking. They all acknowledge that they are willing to keep widows as concubines; and, when an elder brother dies, the younger brother takes the widow.

Next to the Ahirs the Kurmis here hold the highest place; and in Parraona they obtained the whole property, although they were not able to secure the title of Raja. This, however, was bestowed on the family by the late Asfud-Doulah; but it gave great offence to the Rajputs, and has been discontinued. The families most nearly connected with the chiefs of Parraona, and some others, who were Chaudkuris of Pergunahs, are reckoned Ashraf, and scorn the plough. While a great many of the Saithawar and Patanawar tribes have become ashamed of the term Kurmi, and reject all additions to the names above mentioned, although it is well known, that they are Kurmis, and many of them are not ashamed of this name. On the right of the Sarayu this tribe is most commonly called Kunmi, or Kunbi, which, in the account of Mysore, I have written Cunabi; for it is one of the most generally diffused and numerous tribes in India; and in Malawa has risen to great power by the elevation of Sindhiya to the government of Ujjain. This person was a Kurmi; but I am told, that at his capital the Kurmis are now reckoned Rajputs, as they would have been here had the Parraona family been a little more powerful. There is some reason to suspect, that their claim is better founded than that of many who have had more success; for it is alleged by many, that they are the same with the Tharus, whose claim to be descended of the family of the sun, is supported by many circumstances which must be al-

lowed to have some weight, although I do not think them conclusive. If the Kurmis, however, are the same with the Tharus, they are at any rate descended of the most powerful, most civilized, and most ancient tribe, that has been sovereigns of the country since the time at least of the family of the sun. As the Tharus, however, are impure, the Kurmis strenuously deny the connection, they being nearly as pure as the Ahirs. They formerly eat wild pork; but now reject it, and will not acknowledge that they drink spirituous liquor. They keep widows as concubines. Their Gurus and Purohits are the same with those of the Ahirs. The families reckoned Ashraf, perhaps 110 houses, can read and write. All are willing to carry arms, and several do so. The Patanawars and Saithawars, unless exceedingly poor, will not hire themselves as ploughmen, nor on any account act as domestics; but, except the Ashraf families, all are willing to plough; and, except the two above-mentioned tribes, the others are willing to be domestic servants. On the whole, there are about 44,335 families, of which 52 per cent. may be Saithawar, 38 per cent. Yasawars, 6 per cent. Gujaratis, 2 per cent. Dhalphor, or clod piercers, 1 per cent. Patanawars, and 1 per cent. Chanaus, or Chandanis, and Akharwars. The Saithawars seem to be the same with those called Ayodhyas, in Behar, being by far the most common near Ayodhya. The Yasawars are thought to have come from Jayasa, a great manufacturing country S.E. from Lakhnau (Jayes R.), in which case the name Yasawar, often used in the accounts of districts formerly surveyed, should be written Jayasawar, as the Pandits here contend should be the case.

Nearly of the same rank with the Kurmis are the Kairis, who cultivate kitchen gardens and fields, and who never become soldiers. They are often called Murawa, from the radishes, which they rear. They have the same priests with the Kurmis, and eat in the same manner; but most of them are of the sect of Vishnu, and altogether reject animal food. Their whole number may be 10,348 families, of which 57 per cent. are called Kanojiyas; 26 per cent. are called Bahamaniyas, it is said from a territory of that name in the east part of this district; 13 per cent. are Sarwariyas, named after this part of the country; 3 per cent. are Goyits; and 1 per cent. Jaruhars. The Barai, who cultivate betle leaf, are here reckoned

equal to the Kairis. A great proportion of them are mere cultivators of grain, and some few (71 families) are mere retailers of the betle leaf, very little being reared in this district. The families may in all amount to 1059, of which more than eight-tenths come from Jayasa, being called Jayasawars, a name which in former accounts has been corrupted into Yasawar. Nine-tenths of the remainder are called Chaurasis, from a territory near Merzapoor, and the small remainder is from Kanoj.

In this district, these three tribes of cultivators are reckoned superior to most artificers, although there are many who observe almost equally the laws of Hindu purity, that is, they abstain from spirituous liquors, and from meat killed by a butcher; but they still eat the wild boar, although some are beginning to reject this food. The following are the tribes of this kind. They are all allowed to keep concubines, and the younger brother must keep his elder brother's widow. They have Brahman Purohits, and the sacred orders are willing to give them instruction, but many of them adhere to the Ramanandis and Atithis.

The Lohar, or blacksmiths, who in Behar are reckoned impure, in this district, as well as Bengal, are reckoned pure, and are the highest among the artificers, except the confectioners, who hold in some measure a place between the Vaisyas and Sudras, and the Barai. They all work at their proper profession; but many are also Carpenters, and more have farms, which they cultivate at leisure hours. The whole may amount to 1395 families. The carpenters (Barhais) occupy the place next to the blacksmiths, and, like them, follow their profession, only at their leisure hours they cultivate a little land for their own use.

The people who make red lead, in number nine families, constitute here a separate caste of nearly the same rank with coppersmiths. Coppersmiths are divided into no less than three castes, which, although they follow the different branches of the profession without distinction, do not intermarry, and each contends for superiority, although by all others they are reckoned on an equality.

The Tharus, once lords of this country, and claiming to be the descendants of the family of the sun, are divided into two kinds, the highest of which, the Nalapuriyas, are thrust thus

far down, and the others are sunk much lower. The Nalapuriyas observe tolerably the rules of Hindu purity, and have Upadhyaya Brahmans, the highest of the sacred order on the hills, for their priests, while the Ramanandis and Atithis, are their spiritual guides. They eat the wild hog, but reject fowls, and the tame sow. They may amount to 132 families.

The Rawanis, mentioned in Behar as the descendants of Jarasandha, are confined to the borders of Mithila, where they are numerous. Here there are only 116 families, and these are held on the borders of impurity. The Khawas, like the Rawanis, are all slaves, and are said to have accompanied the Chauhan Raja, when this warlike chief retired from Chitaur to the hills, and to have carried his baggage. They have ever since continued in the service of his descendants, and are partly employed in the cultivation of their personal estates, partly as the most confidential domestics. About thirty families are now settled on the private estate that the Raja of Palpa still holds on the plains of this district.

The Domra, who work in bamboos, have disgraced themselves not only by their inordinate appetite, for they will eat food prepared by any one except a washerman, but by removing dead carcasses, and by being public executioners, while their women do not scruple to confess, that they drink spirituous liquors. They are very few in number (76 families). Many allege, that they were once lords of the country, and that the Domkatar tribe of military Brahmans are not in reality different, but abandoned their impurity, when raised to the military rank by Mahananda.

The Hulalkhor or sweepers reject the food dressed by washermen, although they make no scruples about a good dish, into which even a Christian has thrust his knife. Those called pagans amount to about 97 families. Having detailed the tribes of Hindus,* I now proceed to give some general account of their manners, which differ more from those in Shahabad than the latter do from those in Behar, although the Brahmans of Kanoj have possession of both this district and Shahabad, while the Majas are in possession of Behar; but it must be observed, that the Brahmans of Shahabad belong chiefly to the Sanauriya and Antarvedi provinces, while

* On account of the necessity of economizing space, many pages of the Hindu and Muhammedan tribes have been omitted.—[Ed.]

those of this district are chiefly Sarwariyas, who consider the manners of the other two provinces so disgraceful, that many affect to speak with contempt of these provincials, and would wish it to be understood, that these only are Kanojiya Brahmans, while the Sarwariyas form a separate and more elevated race.

Many Bengalese indeed are willing to admit, that the rules of Hindu purity and religion are more strictly observed here than in the province of Behar. Considering the enormous proportion of the high castes, it is indeed wonderful that more attention is not paid both to purity and to the performance of ceremonies.

Almost all the young women, who can afford it, wear in dress the petticoat, although it is not a legal Hindu dress, and which therefore they must lay aside when they perform any religious ceremony or the important office of cook; nor are widows permitted to use this vanity. The men also on all public occasions, such as visiting the great, or at their marriages, endeavour, if possible, to imitate the Muhammedan dress, nor do Pandits even scruple on such occasions to wear the turban and trowsers.

The Sarwariya Brahmans, and all the sacred order here imitate their example, do not eat rice cleaned by boiling, that is purchased in the market. What is cleaned without boiling, may be anywhere purchased; yet the distinction is very slight, for the Brahmans' women never clean the rice themselves, and low women are employed to boil the rice before it is cleaned. The conscience is saved by this operation being performed in the Brahman's house, and by the water used being drawn, and carried home in his vessels, for this is done by the low women employed to clean the grain. The Brahmans here in general decline to eat parched grain purchased from a shop, and sweetmeats, consisting of grain and sugar fried in oil, they altogether reject; but they use the confections made of sugar and curds, and they carry grain to the parcher's shop, who prepare it before them, and eat this without scruple. They never eat either of these refreshments without purifying the place, on which they sit, with cowdung and water; a ceremony that elsewhere is only considered necessary at regular meals. They eat goat's flesh both when sacrificed, and when killed on purpose; but will

not purchase a joint from the shop of a professed butcher. They eat also deer, porcupines, and hares, partridges, quails, pigeons, turtle-doves, and wild ducks of several kinds, and fish. It is admitted that, according to the written law, they might eat wild hog, lizards, turtle, and wild pullets; but any one, who presumed to do so, would infallibly lose caste. Two or three Pandits are shrewdly suspected of drinking in the worship of the goddess; but they keep it as secret as possible; as, if clearly proven, they would undoubtedly lose caste. From the vast number of stills, however, and the small number of the low tribes there can be little doubt, that many persons of pure birth drink in private, but all deny the doing so as strongly as the Brahmans. The Rajputs, Baniyas, Kayasthas, Ahir, Kurmi, and Kairi, who form a large proportion of the remaining Hindus, live nearly on the same footing with the Brahmans, only, except the chief families of Rajputs, they make no difficulties about who cleans their rice, or about sweetmeats and parched grains. In fact there are more strict livers among these lower tribes in proportion, than in the sacred order, a much larger proportion of the low people being of the sect of Vishnu, which altogether rejects animal food, and rice cleaned by boiling. The greater part of the pure Sudras pretend to be as strict as the Brahmans respecting liquor. The abominable tribes here forming a large proportion, and there being few intermediate gradations, the number of tame swine is very great, and the impure indulge their appetites as much as in Behar.

The Brahmans, and all the women except of the lowest dregs of impurity never smoke tobacco, except as a medicine, but for this restraint they make up by chewing. The men of all degrees lower than Brahmans smoke without shame. Brahmans may without loss of caste intoxicate themselves with hemp; but it is only used to any considerable extent by those who have abandoned the pleasures of the world for a religious life.

The funeral expenses here, as in Behar, are very moderate, nor is it usual to read the funeral ceremony, when a corpse is burned, even when a faithful spouse accompanies her husband on the pile. The ceremony is read only at the funerals of Rajas, or very principal Pandits. The mourning lasts from 10 to 30 days according to the rank of the parties,

the highest mourning least. During the mourning ten offerings (Pindas) are made, and thrown into the river. When the mourning is over, an offering is made to the Mahapatra Brahmans, and obsequies (Sraddha) are performed. The Tithi or annual commemoration of deceased parents is usually performed, and also that called the Pitarpakshas as in Behar, but the monthly commemorations are neglected. The moribund are treated as in Behar; and all, who can afford it, give a cow to the Brahmans. Those, who are poor, give 4 anas, which are called the price of a cow.

The expenses of marriage, especially of women, are very heavy, and, as I have mentioned, have led in some instances to the most barbarous practices. Persons are much blamed who do not procure husbands for their daughters before the age of puberty; but the young women, whose parents have neglected, are not considered impure; and it is the lowest ranks, that marry earliest, both because the expense is moderate, and because young widows are not among them condemned to celibacy. The marriage season lasts five months, but the heats of spring are the most common, the great harvest being then over, and the people of course being then fullest handed, while the poor farmers have then little to do. The scarcity of milk in the cold season is also a strong objection to marriages being then celebrated, as milk forms a principal part of the feast. China is not considered as at all necessary. An eldest son cannot be married to an eldest daughter, nor can a first born son be married in the month Jyaishtha. Unless a wife has no children, it is not usual for a man to take a second, nor is it here considered lawful; but some rich men indulge themselves, nor is any punishment or atonement thought necessary, the two wives, indeed, in general take care, that the sufferings of the man should be adequate to his fault. The marriage here is only a betrothing as in Behar. Consummation does not take place until after puberty. Certain Brahmans of the Sakadwipi race, and called Sumanggalis, have a hereditary right to some fees on marriages in most parts of the district, but not in all. This right is said to have been granted to them by different Rajas. The custom of widows burning with their husband's corpse is much honoured, and little monuments are raised over the places of the sacrifice. These are much more numerous than one

would expect from the number of sacrifices said annually to occur, which amount to about thirteen. Many irregularities are admitted to favour a custom considered so honorable; nor is any religious ceremony thought necessary, which probably arose from the office of the priest having been dangerous during the Mogul government. Our police, I believe, never inquires into the matter, to know whether the act on the part of the woman is really voluntary. Widows of the highest castes may burn at any period after their husbands' death, that they please, even if they have been present, when their husbands died; nor is this here admitted to be an irregularity, as it would be considered in Bengal. But among the irregularities admitted for the sake of encouraging a practice thought so laudable, I may mention a widow of Bakhira, who 10 or 12 years ago burned herself with her husband's corpse. She had an only son five or six years of age; and, there being no relation to take care of him, she took the child with her on the pile. I also heard at Bangsi of a widow who did not burn herself with her husband, but sometime after his death she lost her son, and she was burned with his corpse, a much more natural action than the former, which is altogether shocking.

The custom of concubinage (Sagais) is perfectly on the same footing as in Behar. When a division of property takes place, the children by virgins get 10 shares, and those by widows have six shares. Unmarried women or widows, who have children, lose caste, nor is the father of the child bound to provide either for it or the mother; but the man, in any caste that does not admit of concubines, loses caste by fornication, unless he be of a temporal power sufficient to set the law at defiance, as is the case with Rajputs and Kayasthas, both of whom have connection with even infidels without disgrace. No man is however tolerated to meddle with women of a rank higher than himself. Although the Hindu law prohibits the capital punishment of women, the custom from time immemorial, until the English government, permitted the near relations to put to death any female, that disgraced them; nor was it considered as at all proper for the government to interfere. It is indeed alleged, that several persons of rank have on such an account put their own mothers to death, young widows left as managers of large

estates during the minority of their son having great temptations; nor, until their sons arrival at manhood, durst any one presume to blame their licentious conduct, the paramour having usually the whole power of the estate.

In the account of each division I have mentioned the most prevailing sects, and in the account of castes some farther explanation has been given. The Brahmans are chiefly of the sect of Saiva, Rama is the next most common favourite, then the female power, a very few worship Krishna, and Nanak has acquired no considerable number of followers. There are here none so bigoted as not to pray to any god that may come in the way, nor to speak of any without reverence. It must be observed, that the Hindus have two forms of secret worship (Upadesa). One, given to the three castes that wear the thread, is taken from the Vedas, and is called the Gayatri or Vaidika Upadesa, and is taught by any person who knows it to the youth when he assumes the thread; but a great many even of the sacred order soon forget it; and of the lower castes, except Rajas and rich merchants, few recollect the part which has perhaps once been read or repeated to them. The other secret form, taken from the Tantras, is only communicated by the person adopted as sage or Guru, and is repeated by him into the ear of the adherent. It is therefore called the Tantrika Upadesa, or Gurumukhi, and in this district the most common phrase, at least among the unlearned, is to say that such or such a man has employed such a priest to blow in his ear. Every one, when he assumes the thread, goes through the ceremony of receiving the Gayatri; but many decline receiving the Tantrika Upadesa until they advance in years; because the sage is troublesome, and after this instruction men are required to put themselves under more restraint. Very many of the Brahmans neglect praying for the remission of their sins; and the lower castes of course very seldom trouble themselves about the matter.

The number of images of Siva, under the form of the Lingga, is exceedingly great, and all who belong to this sect pretend to follow the doctrine of Sangkara, although the Atithis, who are the guides for many, and are every where the priests of these idols, have departed very much from the rules of their great doctor, and most of the Brahmans know nothing about them. His works are, however, rather more studied

than in the east. Although the sect of Vishnu is very numerous, the images of any gods of this class are chiefly confined to the convents of Ramanandis, or other religious mendicants; and these gods are most commonly worshipped in private under the form of the stones called Salagramas. Rama and Sita are by far the most common object of worship, Krishna has a few adherents, and still fewer join Radha to that god; but the most common images in temples, said to belong to this sect, are usually called Vasudev or Chaturbhuja, although others of the same form have been variously named; and they all seem to me to have been taken from ruins belonging to the sect of Buddha; not from any connection between the sects, but because the images were discovered, attracted notice, and required some orthodox name or other. One of them is called Parasurama, although there is no form of worship by which that deity could be addressed, nor has it any resemblance to the figure, under which he is usually represented.

Although the sect of Sakti is not numerous, there are a good many temples and images of the destructive female spirits, who are applied to by all when in fear. The worship of Kali has been introduced since the English took possession,* some of the wise men of the east having told the wiseacres here that she is the deity of the English, to whose favour they entirely owe their great success. Until this deity was introduced, it was not common to call the female power by any peculiar name; she was usually spoken of, and worshipped as Devi or Bhawani, two appellations implying merely the goddess, although by the latter term Sitala is commonly understood. There may be a few images called Surya, but they are of no celebrity; and there are many of Ganes, but merely as an attendant on Siva; nor did I hear of one person who belongs to the sects which worship these gods as their favourite.

The most learned that I have consulted concerning the Gramyadevatas say, that these ancient objects of worship were originally anonymous; and that the place consecrated to the worship was called the Sthan or place of the Gramya-

* This is but little complimentary, as Kali is one of the most cruel and blood-thirsty of the Hindu deities.—[Ed.]

devata, or Dihuyar, which latter term is almost the only one used here, or indeed known, except to the learned. Almost every old village (Asuli Mauza) in most divisions has such a place generally on a high spot, and under a large tree; but in a few villages there is no public place, and the ceremonies are performed in the house of the priest. In Parraona, however, it was said, that very few villages had a place for the worship of their protecting gods. It is supposed that it is only of late that any of these places have been dedicated to peculiar deities, and chiefly when inhabitants have been settled in a place that has long been waste, and its original Sthan neglected or unknown. On such occasions the magicians called Sokha are consulted, and the one employed, after going through many ceremonies, points out the proper place, and following the fashion of the day, mentions some god or ghost, who is to be considered as the Dihuyar. The priest is always of some very low caste, Chamar, or Dosad, and offers swine and spirituous liquor at harvest home, and other fixed occasions, receiving from the people a certain allowance to defray the expense, even where a great ghost of some higher caste, or god of the Brahmans has been selected, although in the former case the proper priest is always of the ghost's caste, and in the latter a Brahman or Atithi. In a few of the latter cases, where the god selected could not with decency be offered pork, the usual offerings are made by the impure priest at his own house, as I have above mentioned. The appointment of ghosts or peculiar gods to be Dihuyars, although common in many parts of the district, is in many others considered as quite irregular, and the places dedicated to the worship of these ghosts and deities are considered as quite distinct from that of the Dihuyar. The Sokhas indeed, who direct the affair, are ignorant fellows; and, were they the most learned men in the country, they probably would fall into an equal number of errors, as no Pandit whom I have consulted can give any rational account of the origin of this worship, of the nature of the Dihuyars, or why these deities are now supposed to be destitute of power. In Bengal and the south of India the sacred order indeed considers their worship illegal, notwithstanding that to appease the fears of the women it is always continued, although often concealed; but here even the Pandits admit that the worship is legal,

and at marriages, or any other of the Dasakarmas, the Gramyadevata is invoked among the crowd of gods. At marriages and harvest home the Brahmans send an offering to the Sthan, through the priest; and the same is done when they are in fear, especially from sickness. The high castes, however, have dedicated many Sthans to different forms of the female power; and, as long as possible, they content themselves with making offerings there; but in urgent danger fear compels them to have recourse to the Dihuyar. They indeed usually lay the blame on the fears of their women; but that their own never predominates is rather problematical. In fact these Sthans are the places of worship by far the most frequented, and they would have become dangerous had not the sacred order discovered that some ghosts of their own were vastly more powerful and mischievous than those of the low fellows, who had hitherto enjoyed the spoil. These ghosts are called Brahma Devatas, and are never among the Dihuyars, having in general hereditary priests of the sacred order, who in many places make burnt offerings, which are never given to the Dihuyars, who must be contented with miserable little images of elephants and horses, that the Brahman ghosts totally scorn. In some parts, however, no particular man enjoys this office, and each votary employs his Purohit, or any other Brahman that he pleases. In most parts of the district every chief or independent (Asuli Mauza) village has not yet obtained a deity of this kind; but in many parts a near approach is making to this improvement, which will probably soon altogether expel the Dihuyars, as indeed is said to have nearly happened in Parraona, where every Mauza has a Brahma Devata, but very few have Dihuyars. Where, however, it has made little progress, the Brahmans have contrived to have some of their own gods introduced as Dihuyars, and act as their priests, which answers perhaps almost as well. The Dihuyar never has any image, only to mark the place a lump of clay is placed on a platform of the same material.

In most villages the peculiar deity has still no name, and perhaps the origin of this worship may be referred to a time when the Hindus may be supposed in reality to have had only one god, and the reason why the priests are of the dregs of impurity, who scruple not to sacrifice swine, is perhaps that

such was the custom of the ancient priesthood, and that, in the regular course of succession, this custom has remained unchanged, although the high ranks have long abandoned such impurity.

Bathing in certain places on certain days and pilgrimages are still more common than in Behar or Shahabad. In the topography have been mentioned the various places in this district that are frequented, and the numbers that usually attend. Out of the district Ayodhya is by far the most frequented, especially from the places in its vicinity. It was stated, that no less than 184,000 people went there annually from thence, partly on the birth day of Rama, and partly on the full moon of Kartik. On the first occasion they worship at Swarga Dwara, where Rama went to heaven; on the second occasion they visit Goptarghat, where the cow Kamdhenu came from heaven, and where Lakshman, the brother of Rama, disappeared. The cow above mentioned is a deity, who gives to her votaries whatever good thing they want; 12,000 persons go to Benares at every eclipse.

About 330 persons go to Baidyanath, and all go previously either to Haridwar or Prayag, from whence they carry a load (Kaur) of water to throw on the god. They are almost all hirelings, poor Brahmans, who make a profession of the business. The journey occupies about three months, and they receive from 12 to 15 rupees for the journey, with some shoes and cloth, and money to defray the expense of offering the water, and they beg as much as possible on the way. The Rajas and wealthy Zemindars send every year; poorer persons send only occasionally.

The Holi is here the greatest festival. The ceremony is performed on the full moon of Phalgun, when (Hom) burnt offerings are made to all the gods, in order to save the people from Dhundha Rakshasi, who would otherwise destroy many. Next morning the people throw red powder, dust, and dirty water at each other until noon, after which they clean themselves, and having prayed to their own favourite god, each man gives a feast to his family and servants. The grand part of the ceremony, however, consists in singing obscene abuse, for at least 15 days before the offering, and some continue to sing eight days after the offering has been made. Rich men hire dancing girls and boys to perform in this time; but except

old men all join in the obscenities and abuse, which however do not fail to enrage a great many. The women assemble together in the house, and sing and abuse each other, it is said, with more indecency than the men; but they do not go out, nor admit men to their parties. The men on the contrary go into the streets and roads, and attack whoever they meet. Nor are sacred persons exempt from abuse, especially Kavir, on whom the orthodox heap every abusive expression, in order to vex his followers.

The Nagpangchami in most places is much reverenced. The head of the family bathes in the morning, and paints on the wall of his sleeping house two rude representations of serpents, and makes offerings to the Brahmans. He then feasts his family and servants. On this day many people pray to the eight chief dragons in the pit; and the virgins throw some playthings into the water. In Bhadra the people celebrate the Nandotsawa or Dadhikando. This festival was established by Nanda Gopal, the foster-father of Krishna. On the eighth day of the waning moon the people fast, burn lights before images of Krishna or of Rama, and make offerings. Many people then eat, but others fast, and the night is passed in singing and music. In the morning the chief votaries carry about a mixture of curds, water, and turmeric, and throw them on the tumultuous crowd employed in beating drums, bawling, and dancing with all their might. Since the English government rich men send this precious mixture on an elephant, which was not tolerated in the time of the Nawabs. Gopi Mahan Babu has lately introduced this festival in Bengal, where it was not known before, and it is still confined to Calcutta.

The Charakpuja is not known; but some of the lower Bengalese this year assembled at Gorukhpoor, and one of them not being able to procure the apparatus necessary for swinging, thrust an iron spit through his tongue before Hathi Devi. It is not lawful for the Sudras to read any of the books composed by the Gods or Munis; but some of the Kshatris both read and understand them; and many Brahmans are employed to read and explain the Purans to the people of high rank. All men of rank have the utmost objections to the forms of oath, which our courts require, especially to touching the Ganges water. They wish to be put on the same footing

with the Europeans and Muhammedans, in taking an oath on the book of their law, to which I can see no possible objection. The compelling people indeed to perform an action, which they consider as a sin, in order to secure their veracity, appears to me a very great hardship, as well as absurdity, the degradation of taking such an oath naturally rendering the persons compelled careless of their character and word; and, so far as I can learn, it is scarcely possible, that any form of oath, or even any examination without oath, would be found to produce evidence, upon which less reliance could be placed, than that extorted with so much disgust and violence. Disputes are occasionally settled by the one party agreeing to refer the matter to his opponent's oath. This is taken either before some image of Siva, or at a place dedicated to the ghost of Bechu Upadhya, and the having recourse to such a means is owing no doubt to the tediousness, uncertainty and expense of legal suits.

The places of prayer do not differ essentially from those mentioned in Behar, only that the Sarayu is not so much frequented as the Ganges; and some, who live near temples worship their peculiar God there; but by far the greater part prays at home. It is only the wealthy and learned, that have Salagramas. The chiefs have chapels (Mandir) with a priest to perform daily worship, and some attend this; but others go only occasionally. The Sudras are not allowed to pray before the Salagrama; and, if any rich man of this rank keeps one, he must employ a Brahman to worship it. Many of them here worship a Yantra or cabalistical figure, usually made on a copper plate, but some on gold, silver, or crystal. These may be made to represent whatever God the votaries please, and some sage draws the proper figure, which the workman afterwards completes; for ignorant people do not know the proper form, which differs for each deity.

The sages (Gurus) who instruct the Hindus in religion have here no more profit than in Behar, but the sacred order retains a much larger share of the flock; because almost the whole property is vested in the Brahmans and Rajputs. Scarcely any of the former have deserted their brethren, and no great proportion of the latter. In the topography I have carefully marked the various persons, who have in each division acquired the jurisdiction of Gurus, and the degree

of ascendancy, which each has obtained. I shall now give an account, as in Behar, of those who perform the office, but I must previously observe, that here the term Guru is not very commonly used, and that Gosaing is applied as synonymous, and is applied to the sages of all castes and sects. It is not however applied to them exclusively; but is also very often given by servants to their masters, and sometimes by wives to their husbands.

The Pandit Brahmans, who act as sages, although themselves of different sects, have not divided their flocks, and each of them gives his adherents the form of worship for whatever deity of the orthodox, that they please. Some of their followers are considered at liberty to choose whatever sage they please; but the greater part is considered as hereditary property. Even this does not here divide in equal shares among the sons of the sage. The most learned of the family is either chosen as successor, for the whole or each of the flock is allowed to chose which ever of the sons he pleases. The Brahmans of the sect of Siva, who follow the doctrine of Sangkara, have no peculiar Gurus, any Pandit, that they choose, giving them instruction. The Dasanami Sannyasis, described in the account of Behar, are here usually called Atithis, because the term Gosaing used in Behar is given here to all sages. The term Atithi implies a vagrant, but this is not applicable to a great many here, who have very good houses, and some of them have wives and families; but these last are held in little estimation, although they do not trade, and endeavour to act as sages for as many as possible. Those who pretend to observe the rule of celibacy (Nehangga) are often suspected of private intrigues; but all, who adhere to the rule, are considered as sure of eternal bliss, and on this account are called Nirbanis. All the places, where the Atithis reside, even those occupied by married families, are here called Maths, and, where independent chiefs of the order reside, are called Gadis or thrones. The number of these chiefs is not great, and none of them is near so wealthy as the one of Buddha Gaya, but all have lands, and all the temples of Siva, and several of the Saktis belong to the order. The chiefs even of the inferior Maths are called Mahantas; but they are appointed by the chief of the throne, on which they depend, as are also the priests (Pujaris) of the temples. A few of the inferior houses depend on thrones at Ayodhya,

and a great chief at Benares has here purchased a large estate, which is managed by one of his pupils. Each of the thrones has a number of pupils, frequently employed in pilgrimages; and from among these the occupant appoints the chiefs of inferior houses, and the priests of his temples, who usually send to him whatever part of their profit is not necessary for their subsistence. Before the chief of a throne dies, he usually appoints some of his disciples to be his successor, and the installation is performed by the neighbouring spiritual thrones, and temporal chief. The Atithis are in gereral quite illiterate, but one man has acquired the title of Pandit, although he is not very eminent as a scholar. The Atithis instruct indifferently in the worship of Siva, and of the Sakti. A few ignorant Brahmans, a good many Bhumihars and Kshatris, with a large portion of the Sudras adhere to this order.

At Gorukhnath is a convent of Kanphata Yogis, who are sages for a few of the Sudras in the worship of Siva. The chief is called a Mahanta, and was said to be absent, when I visited the place. His pupils said, that he was learned; but such at any rate was not their case, and I am very doubtful of the endowments, which he was said to possess. His prayers are considered by all castes as peculiarly efficacious in restoring children to health. The convent appears to be tolerably rich, and is neater than usual. There are besides six or seven married men in different parts, who instruct in the worship of Gorakhnath. This personage, so far as I can learn, is by his sect considered as the supreme being; but endowed with body and form (Shukul). In the Satya Yug he resided at Peasur beyond Lahaur. In the Treta Yug he resided at Gorukhpoor. In the Dwapar Yug at Hurmuj (Ormus) beyond Dwaraka, in the Kali Yug at Gorakhmarai, three months journey west from Gorakhnath. He also for some time resided near Pasupatinath in Nepal, showed great favour to the Newars, and made them Rajas, ever since which his name appears on the coin of that country. The Brahmans of this district allege, that the Kanphatas are in fact of the Kapalika Mata, the members of which chiefly worship Bhairava, although they keep it secret. The Kapalikas are so called, because they keep human sculls, out of which at their horrid rites they drink spirituous liquors, and offer human sacrifices. The Yogis, they say, are not permitted

to marry but may communicate with whatever woman they please. All these circumstances are denied by the Yogis, nor do I know which is true.

It is said, that most of the Pandits of the sect of Vishnu in this district pretend to be of the Rudra Samprada established by Sangkara Acharya; but they do not follow the Dandis of Benares, nor have they any men that pretend to have abandoned the world, and the pleasures of matrimony. The greater part however of these persons call themselves of the Adwaita Mata, which so far as I can understand, is the same with the Gyangn mentioned in the account of Ronggopoor, alleging that all souls are portions of Parabrahma or the supreme God. The consequence which they draw from this doctrine is rather extraordinary; namely, that they may worship any living thing called a god, as being a portion of the supreme incorporeal deity, vested with a body capable of attending to their wants. Their opponents the Dwaitas, who here are few in number, allege as most christians do, that God and the inferior spirits are quite distinct, and they worship therefore only this god and his spouse, for they deny altogether the existence of an incorporeal Supreme Being, and reject the worship of all the inferior deities. The Pandits of the Rudra Samprada, although avowed worshippers of Vishnu, are offended at the term Vaishnav, which they bestow on the Vairagis, whom they consider as greatly their inferiors.

The god Rama in this district is the principal object of worship, except among the Brahmans and Kshatris, who worship chiefly Siva; and the Ramanandis or Ramawats have very numerous establishments, and a great deal of land free of revenue, the greater part of which I am told, they obtained from Suja ud Doulah, to whom they contrived to render themselves very agreeable. They are indeed skilful courtiers. Most of the lands were therefore granted to the convents of Ayodhya, near where this prince resided, and the convents or Akharas, of that ancient city are called Gadis. The convents here are mostly dependent on these Gadis, are under mere agents, frequently changed at the will of the superior, and chiefly employed to manage his temporal affairs. In this district however, are several independent chiefs, called Mahantas, and entitled to sit on a throne (Gadi). Wherever any

Ramanandi resides is called an Akhara, although here the term Math is often used. A few Ramawats have married; but are held in no respect, and cannot live without personal labour. In almost every convent however, I see some women called Avadhutins, and dedicated like the men to religion. All that I saw were old, very unlike to excite scandal, and the Ramanandis have the character of observing the rule of chastity much more strictly than the Atithis, whose women when they have any, are never exposed to view. It is here alleged, that the Acharyas by whom several of the Gadis of Ayodhya are occupied are of the true school of Ramanuja, and reject altogether the doctrines of Ramananda without adopting the extravagances of the Dandis, but I am doubtful how far this report is well founded, Jagannath, who gave me the account followed in Behar, being very well informed on the subject, and the Acharyas wearing the same marks on the forehead with the common Ramanandis, that is they make two vertical white marks with a red one in the centre. But the followers of Ram Anuja, in the south at least, use three white lines. The only Pandit Brahman of the Sri Samprada adhering to Ram Anuja, of whom I heard in this district, is a man from Tailangga who has settled at Bangsi. The Ramanandis here in general will not give the form for worshipping any of the gods except Rama and Sita, but some consent to give that of Krishna. The Avadhuts are called not only Ramanandis and Ramawats, but Vairagis and Vaishnavs, which two terms are however given to some other persons, and to judge by their dress, all are Brikats except one convent at Gorukhpoor, which belongs to the Gudaripos; but the Mahanta is rich, and dresses like other people. His disciples, however, when they go abroad to beg, use a party coloured garment, composed of small fragments sewed together, as if they had been cut from rags. Ramadas of the convent of Mansarowar at Gorukhpoor is learned, as is Rama Prasad Das at Bangsi; but in general the Ramawats are as illiterate as the Atithis; and of the Mahantas of Ayodhya even not above two or three are learned.

Among the convents of Ramanandis here a few are distinguished by the name of Chaturbhujas, and their inhabitants mark their foreheads with three vertical white lines, like the Sri Vaishnavs of the south, although they entirely follow the

doctrine of Ramananda, and eat and drink in the company of those who mark their faces differently. The origin of this name is said to be as follows. A certain Ramawat was giving an entertainment to a number of his brethren; and while going round to distribute the food, his robe fell from his shoulders. As usual among the Hindus, he was distributing the rice and curry with his naked hands, and while these are besmeared with grease and the other ingredients of curry, it is held very impure, as it really is, to touch their clothes. The good man was therefore puzzled how to act, when two additional clean new arms issued from his shoulders, and replaced the robe. He was afterwards of course considered as an incarnation of god, and his pupils (Chela), and all theirs in succession to the present day, assume the title of Chaturbhuja or four-armed.

The low people who wear extraordinary large beads, and abstain from animal food, are called Bhakats; but are not sages for any one. The Sokhas are the instructors of the vile tribes, instructing them in the worship of their own gods. The Brahma Samprada has a few followers usually called Radhaballabhis, as they worship Krishna as the husband of Radha, and conjoin her worship with that of her spouse. The sages of this order are partly Pandit Brahmans, and partly men who have abandoned the pleasures which the sex bestows, live in Akharas, and are called Vaishnavs and Vairagis. Only Brahmans and Kshatris are admitted into this order. The generality of the Brahmans here are very much scandalized at this sect, which pretends that Krishna, not only a god but a Kshatri descended of a Brahman, and counting in his kindred many of the most illustrious sages of the sacred order, married a Sudra, the daughter of a cowherd. Although, therefore, they admit that Krishna had amorous dalliance with this damsel, and many others of no higher rank, they deny altogether his having married any of these low creatures, who were merely concubines. Such assertions of course enrage the Radhaballabhis, who entertain the doctrine usually taught in Bengal, although the priests here have no connection with the Goswamis of that country, come from Brindaban, and are evidently the same with the Radhaballabhis mentioned as a Panth in the account of Behar; but here they are reckoned a branch of the school of Madhav.

It must be however observed, that there are other Radhaballabhis, who belong to a heterodox Panth established by a certain person named Prannath, who lived in Bundel Khanda; but it has not made its way into this district.

The Sanak Samprada is nearly about as numerous as the Radhaballabhis. Its sages are called Nimanandis or Nimawats; and partly have married, and partly have resisted temptation. I learned however, nothing else concerning this school, except that most of those who act here as sages, if not the whole, are mere agents for the heads of the school, who reside at Brindaban. They have here however not only followers, but estates. Their most distinguished adherent is the Raja of Manikapoor. I have not here heard of any other sects, who teach the proper orthodox worship of the five great gods of the Hindus. I shall therefore now proceed to treat of the Panths or routes to heaven, that have been lately discovered, and those who follow most of them are reckoned by the Brahmans as little better than Mlechhas, while others are treated with more respect.

The adherents of the Kavirpanth are far from numerous, although a tomb, where that personage was once buried, is still shown at Magahar, and is a good deal frequented. I found no person more intelligent than Bibekdas of Patna, to give me a better account of the doctrines of this sect, which is here reckoned by the Brahmans a damnable heresy (Nastik). I shall therefore here confine myself to the history given by the keeper of the tomb. A certain Muhammedan weaver of Benares had married a girl in the vicinity, and was bringing her home, when she, being dry, went aside to the tank called Chandatal, near that city, to quench her thirst. She found there a beautiful child floating on a leaf of the Nelumbium (Kamal), which miraculously bore the infant on the surface of the water. Although the child was apparently new born, it could speak on proper occasions, and refused to drink water or milk from his nurse's hand; but directed, that there should be brought to him a two years' old cow, which of course had never bred; but he sucked her whenever he required nourishment. As the child thus showed an aversion to the faith in Muhammed, a Brahman was employed to give it a name, and it directed, that this should be Kavir. Some years afterwards the weaver wished to have the child

but Kavir declined this ceremony, and became anxious to receive Upadesa from the Pandits; but they declined entrusting him with this secret, as he consorted with the Muhammedans. Kavir had therefore recourse to stratagem, and one night laid himself privately at the door of a cell, where a holy man dwelt. Towards morning the saint, having occasion to come out, stumbled over Kavir, who, as usual among the natives on such occasions, called out, "father, father," (Bapre Bap); but the good man, not knowing the impurity of Kavir, answered, "do not call on your father, but say Rama Rama." Kavir seized on these words, and insisted that they were an Upadesa, and in fact the whole instruction usually given by the Hindu sages to the low tribes consists of the name of some god, which the fellows are taught to mutter incessantly, when they wish to pray. Kavir then became celebrated for his learning and sanctity, and went to Jagannath, where Raja Indradyumna had been in vain attempting to rear the celebrated temples; but the sea had repeatedly swept away the buildings. Kavir having blessed the work, it has remained untouched ever since, and a monument has been there erected to his memory. He then visited several remarkable places, until he came to Magahar 540 years ago (A. D. 1274), and there he apparently died. His disciples were partly Moslems, partly Hindus; but the former seized his corpse, and buried it according to their rites, at which the Hindus were enraged, wishing to have had it burned. While the disciples were in eager dispute about this important point, Kavir, who was in fact at Brindaban, and had only shaken off his old body, sent them word, that if they would open his grave, they might save themselves the trouble of disputing about his body. This was accordingly done, and nothing could be found, except a delicious fragrance. Ever since, however, the tomb has been under the charge of a family of Muhammedans; but, most of the sect being Hindus, it attracted little notice, until about 50 years ago, when a Hindu Mahanta took up his residence at the place, without however displacing the Muhammedan. He was a very holy person, and the Hindus of the sect visit his tomb. His successor usually resides at Benares, but visits the tomb occasionally to manage the free lands annexed, and he always attends at the fair, where about 5000 assemble,

and there are many occasional visitants, whose profits are managed by an agent. The Mahanta takes all the offerings made at the tomb of his predecessor, and the Muhammedans all those made at the cenotaph of Kavir. When Kavir went to Brindaban, he appointed 12 disciples, each of whom formed a Panth or route to heaven, but most people adhere to that of Dharmadas, a Kasongdhan Baniya. This is the account given by the Muhammedan, who calls himself a follower of Kavir; but says, that he also adheres to the prophet, and Koran. Abul Fazil mentions this tomb as being situated at Ruttenpoor (Ratnapoor), nnd that Kavir lived in the time of Sultan Secunder Lowdi (Gladwin's translation, vol. 2, page 41). This would make him much later than the account of the keeper states; as Sekundur Lodi governed from 1488 to 1516; but it is likely, that Abul Fazil may have been mistaken in the date, as well as the place, for no tomb of Kavir was ever known at Ratnapoor, now usually called Bangsi; while the official or Muhammedan name of Magahar is Husunpoor. The Muhammedan governors have, however, always shown a good deal of respect for Kavir, and the present buildings round his grave are said to have been erected about 200 years ago, by a Nawab Fedi Khan, who was superintendent of the district (Chuklahdar) of Gorukhpoor. Kavir, besides his celebrity as a divine, has acquired reputation as a poet, and is said not only to have celebrated the battles and loves of demigods and heroes, which will always be considered the most interesting themes of poetical effusion; but has chosen subjects more suited to the taste of some of our modern composers, such as frogs, weavers and their wives, and the like. He differs indeed from our worthies, and does not treat these subjects seriously, but imitates the blindness of old Homer in making sport of such characters.

There are said to be a few persons of a sect called Satyanami, which seems to have arisen in Baharaich. I have not been able to trace it to the source; but I hear, that a certain Dulandas, a Rajput, who was married, and lived at Kotawa, near Baharaich, was considered as the chief of the sect. He was succeeded by his son Jagajiwandas, and he by his son Jalalidas, who is now the chief. There are besides several sages, some married, some single. The latter are called Vairagis, and Fukirs, and the whole sect is distinguished by

tying round their wrists a black-and-white string, and a bracelet of beads, made of the Karma wood. They admit all castes, and even Muhammedans into their flock, and the chief has in fact taken a Muhammedan name. The Hindus, however, continue to employ Brahmans to perform their ceremonies, and continue to observe all the former rules of caste. They reject, however, the commemoration of deceased parents (Sraddha), and pretend to worship the supreme incorporeal deity alone; but they sing many hymns in praise of Rama. When one man meets another, he says, "Satyanama," and the other repeats the same words. Dulandas is supposed to have been an incarnation of the Supreme God, and has left several books in the vulgar language. Those who pretend to be eminent saints, perform the ceremony called Yoga, described in the Tantras. In the performance of this, by shutting what are called the nine passages (Dwar) of the body, the votary is supposed to bring the breath into various parts of the body, and thus to obtain the beatific vision of various gods. It is only persons who abstain from the indulgence of concupiscence that can pretend to perform this ceremony, which, during the whole time that the breath can be held in the proper place, excites an extacy equal to whatever woman can bestow on man.

Another sect, which has made a little progress in this district, is often confounded with the other, because its mode of salutation, Satyarama, has a strong resemblance to Satyanama. The first propagator of this doctrine was Birudas, a Ramanandi, who was a great practitioner of the mummery called Yoga, and took for his favourite disciple a Muhammedan weaver, named Yar Muhammed, of Delhi. This man instructed Buladas, a Kurmi, who came from the west, and settled in a forest of Azemgar, near Bhurkungra. His chief disciple was Gulaldas, son of the proprietor of the forest, and a Rajput by birth. The lord of the forest having no son, went to the saint, and agreed, if the prayers of this person should procure two sons, that one of them should be dedicated to God, as accordingly happened. Galaldas was succeeded by his pupil Bhikhadas, a Brahman. This man was a great performer of Yoga, and the sect is now usually called the Bhikhadasi Panth, from his name. He left four favourite disciples: First, Chaturbhuja, a Brahman, who succeeded to his throne (Gadi), and freed himself of the source of his

impure desires by cutting off his wife's head, after which he became a great performer of Yoga. Second, Govindadhar, a Sarwariya Brahman, who set up a Panth for himself, having dedicated himself to God, and introduced some new customs. Third, Jivandas, a Kausiki Rajput in the Benares district, was a wealthy man, who deserted his family, but adhered to Chaturbhuja, as his superior. Fourth, a wealthy Mogul; who, on becoming a Hindu, took the name of Krishnadas, and adhered to the old doctrine. Govindadhar had a favourite disciple named Paltudas, who separated from his master, and resided at Ayodhya. He was succeeded by Ichchhadas, as he was by Dayades, whose pupil Tejadas married, or took into keeping, a Panadasi, who calls herself the chief of all the sect in this district; but this, I believe, is a mere pretence. She is, however, an impudent stout vixen; and I am told, that the poor man has abundance of reason to repent of his having abandoned the practice of Yoga. She is a great coarse hag, who daily beats him, nor in her presence dares he utter a word; but she takes good care of his temporals, and is an indefatigable beggar, although possessed of a good deal of land, so that his affairs in a worldly sense are thriving. In this district are a few who follow both branches of this route to heaven. They make different marks on their faces; use different beads; and the Govindadasis use the salutation of Satya-Govinda, in place of that of Satyarama. The chief saints affect to perform Yoga. Chaturbhuja, with whom Manogyadatta was acquainted, pretended to eat daily only two paysa weight (356 grains) of food, consisting of boiled rice and Ghiu. The other persons in the convent indeed alleged, that this was a mere deception, and intended to kill him; but the flock was persuaded, that what he said was true, having watched him, as they thought, sufficiently to ascertain the fact, and interfered to protect him from the invidious attempts of his brethren.

The Aghorpanthi, whom in former accounts I placed among the worshippers of Siva, by the Brahmans here are held in great abhorrence, and are considered as worse than Muhammedans, or perhaps even than Christians; yet it is confessed, that the Rajas and their chief relations have a strong hankering after their doctrine. They seem, like some of the old philosophers, to have no shame, nor sense of decency, and

commit everything that shocks the common customs of their countrymen, on purpose to astonish the multitude. One of them, however, at Gorukhpoor, shocked the people so much, that they complained to Mr. Ahmuty, then judge, who drove him out as a nuisance. Most people attributed to this violence, a sickness with which Mr. Ahmuty was seized. The fellow had thrust himself into the house of Raja Pahelwan Singha, and had bespattered with ordure the high-born chief, who ordered him to be driven out, and it was on a representation of this circumstance chiefly, that Mr. Ahmuty had been induced to act; yet, to the chief's insolence towards the saint, everyone attributed the death of the family heir, which happened soon after. Four or five families have adopted this strange doctrine, and live by begging, or, rather, extorting money from the people; for instance, they go to a shop, and, having made water in their hand, threaten to throw it over all the things exposed for sale, unless the owner gives them something. The chief of the sect resides at the Krimikunda, in Benares, where he has a house called a Math, with gardens and everything becoming a person of rank. In the holy city, many Brahmans, Kshatris, and high Sudras, take instruction from this sage; but do not venture to imitate his manners. They are considered as belonging to the sect of Saiva, and are supposed to be instructed in the proper form of worshipping that deity. The office of Purohit, or priest who performs ceremonies, is what is here the most profitable, and is entirely enjoyed by the sacred order. Many of the Pandits, however, even of the ignorant Karmathiyas, do not act as Purohits; but all the Purohits, who officiate for the higher castes are Pandits. For the lowest tribes, on account of whom any of the sacred order will officiate, there is a class of Brahmans called Dihuyars, or Sthan-patis, or Gramjachaks, of which one is usually attached to every old-established Mauza. They hold the office by hereditary right, nor are they thereby disgraced, and their families may intermarry with the highest in the district, although these high persons by such a condescension, would be reduced to the rank of Tutahas; but not more lowered than if they were to marry with the most learned Pandit of the Tutaha breed. In many places the Dihuyar receives a certain share of the crop, and wherever it is customary, he performs at the thrashing floor the burnt-offering that is made at

the Mauza's expense in harvest. In other places, the Dihuyar is not paid by a share of the crop; but receives some grain from each family, after the crop has been carried to each man's house. In this case, he gives himself no trouble about the thrashing-floor, and the farmers conduct the worship there performed. They make of Kusa grass an image of Yaksha, the under-treasurer of the Great God. They make also a ball of cow-dung, which they call Govardhan, and to these emblems of the gods they offer grain, sugar, and incense. Many of the other Purohits hold their flock by hereditary right, but these are in general men of some learning and their flock is of high rank. Such Pandits as have a flock annexed by hereditary right to their family, are here called Purohitiyas, to distinguish them from the Karmathiyas, who are employed by the middling ranks, and these choose whatever man they please; but both Karmathiyas and Dihuyars are as much Purohits as those who distinguish themselves by this title. When there is no hereditary Dihuyar to receive a share of the harvest, some of the poorer Purohitiyas, or Karmathiyas hang on at the thrashing floors, and beg as much as they can. The property in a flock which is hereditary in the family of a Purohit, is considered as divisible in equal shares among the children of the priest.

There are not here, no more than in Behar, any Varna Brahmans, nor are the priests of the temples (Parndas) disgraced; but very few of the sacred order here accept of that office, except in the places dedicated to the worship of the Brahmans' ghosts. Of the ten Karas, or affairs of consequence, mentioned in the account of Behar, the Purohits only perform here the last seven, beginning with the Jatakarma; but between the Upanayana and Vivaha, they insert the Samavarta, which is performed on the same day with the Upanayana. Formerly, it was delayed for a year or more, but for one or two centuries it has followed the other ceremony without interval. Garbhadhana is not, as I supposed in Behar, celebrated at the first appearance of the catamenia; but, whenever a woman imagines, that she has been impregnated. And in abstaining from inquiries into such a subject the people of this district show some degree of delicacy. The contract of Sagai is not accompanied by any religious ceremony; but the man gives an entertainment; and then, having

laid some red-lead on his knee to denote his strength of limbs applies some of it on the woman's forehead, and gives her a new dress. The contract cannot be dissolved.

Most people here use the ceremonies of the Yajuveda, a few of those of the Samaveda, none, either those of the Rikh, or Atharwavedas. Every Brahman, even the Bhumihar, the Bhats, Kathaks, and Khatris, perform the whole of these eight ceremonies. The Rajas, and other rich Rajputs, do the same; but the poorer and the Sudras content themselves with the Namakarana, Annaprasana, Churakarana, and Vivaha, and the Baniyas add the Pangsabana and Simanta, which the Brahmans neglect.

Dana or gifts to the Brahmans are most commonly offered on the Khichri and Satuya for the honour of their god, and on the anniversary of their parent's death, and on the Preta Paksha, both in honour of their parents. The only sins that the people here trouble themselves about, are the killing a cow or man by accident. A man killing his enemy either in battle or privately, on being moved by avarice or other urgent reason, gives his conscience no trouble about the matter, much less does he vex himself for perjury, theft, or trifles of that nature, when occasioned by causes, which are considered as a justification; but, if he has presumed to kill a sacred animal, for which action no conceivable cause can be assigned; or if he has killed a man by mere accident, and not instigated by any cause, then atonement becomes necessary. The Dana given on such occasions is called Prayaschitta. For breaches of the rules of caste Prayaschitta is not thought necessary, an entertainment to the caste is sufficient. When a man builds a new house or a temple, or digs a tank or well, he also offers Dana. The ceremonies are taken partly from the Vedas, partly from the Tantras, as in Behar.

The Purohit also performs ceremonies, when his pupil is in danger, and the Rajas or great men are accompanied by their Purohits on pilgrimages. Goats, the only tame quadrupeds eaten by pure Hindus, are often killed without religious ceremonies; but when a buffalo is offered, prayers always accompany the sacrifice, although it is not the duty of the Purohit to read these. The funeral service is only read for Rajas or Pandits of uncommon learning.

Although neither Vishnu nor Siva will receive blood, yet

even the Brahmans, who pretend to be of these sects, when in danger, offer the blood of goats and buffalos to the Saktis, and some even of the Vaishnavs do so on the Dasahara; but those of the sect of Vishnu do not eat the flesh; and those who offer on the Dasahara, are such as have lately adopted the worship of Vishnu, and their ancestors having been in the custom of making the offering, they are afraid to neglect it. Burnt offerings (Hom) are very numerous; but any Brahman on many occasions, may perform the ceremony without the assistance of the Purohit. The Rajas in some places here have not only appointed certain Brahmans to receive fees at marriages; but have given authority to certain persons named Brahmas and Bhungidagdhas, who attend whenever Hom is performed, and receive part of the profits. The Bhungidagdhas are partly Sakadwipis, partly Sarwariyas, and the pretence for their levying fees is, that part of the earth is burnt in the offering, and that the proprietor has on that account a right to remuneration, which he has transferred to these Brahmans. The Brahmas are all Sarwariyas. In all burnt offerings there should be a Brahman to represent Brahma, and he takes the share due to that god. In most parts the votary chooses whoever he pleases to represent this deity; but in some places of this district, the office has been rendered hereditary, and certain families, who enjoy it, are called Brahma Brahmans. The Rajas of the Kalahangsa family seem to have been those chiefly, that introduced the three hereditary offices of Brahmas, Bhungidagdhas, and Sumanggalis. It is by means agreed, who this Brahma is, some alleging, that he is the creator of the world; others saying, that Brahma is a mere term for fire, and that there is no order for the worship of the creator. The former sect say, that this refers only to his worship as a Kuladevata or favourite god. It is here held proper, that besides the Brahma, seven other Brahmans should on some occasions attend the burnt offering, while on other occasions a smaller number is sufficient. In Bengal no more than five ever attend, and the only one that is absolutely necessary, besides the votary, is the representative of Brahma, a tuft of Kusa grass serves as a substitute for the others. These substitutes are not admitted here; but then the Brahman is here easily satisfied. In Bengal none can be appeased for less than a rupee.

The Mahapatras are on the same footing as in Behar, but they are not so degraded as the Dakatiyas, who eat swine and drink spirituous liquors. Even these in the Hindu law are considered exempt from capital punishment, and their rank is held higher than that of any Raja. They are however called Karathaba Brahmans, or Brahmans like crows, that is who follow carcasses. Of course this is a term of reproach, and not used in their presence by any, who does not want to enrage them. When a person dies in this country the son next day hangs on the branch of a tree a pot of water, making in the bottom a small perforation. The Maha Brahmans, when the mourning is over, break the pot. This custom is unknown in Bengal or Behar.

The Brahmans here observe the purities of Brahmachari during the time only that is necessary to perform the religious ceremonies of admission, which may be three hours. The Tailangga doctor however at Bangsi, who has been lately mentioned, although a married man, is called a Brahmachari, for what reason no one could say; but he is a man of some learning, very fair spoken, and affects a great purity of life, that is in eating and ceremonials; and he has obtained a Mauza free of revenue, and a productive flock.

No Brahman has become a hermit (Banaprastha), but one gymnosophist (Paramhangsa), has appeared, no one knows from whence, as he does not speak. He lives in the same manner as the fellow mentioned in the account of Shahabad, and appears equally indifferent to his accommodation; but he very prudently seated himself one day in the house of the Thanahdar, or chief officer of police at Manikapoor, a man who wishes to be considered as a Brahman, although it is suspected, not only that he was born a Bhat, but a Muhammedan. Such a subject was highly suited for the gymnosophist's purpose, as by attentions to such a character he might expect to have the defects in his pedigree overlooked.

The only Avadhutins, that I saw or heard of, are those in the convents of the Ramanandis, who are considered merely as servants; nor does any woman set up as a sage to instruct the multitude, except Panadasi lately mentioned. The high castes, including all those called Ashraf, are divided into companies (Pangti) which usually include all the neighbourhood. The members of each company attend each other's

ceremonies; and, when any one of them infringes the rules of caste, they meet, and the most respected men direct what is to be done; but sometimes this occasions a schism (Dal), a considerable party taking the criminal's part, and another set rejecting him; for there is no adequate regulation for deciding their conduct. In this case the Pangti splits into two, and these sometimes continue distinct; but they usually re-unite again when their passions have cooled for some months. The lower tribes have usually their own hereditary chiefs, called by various names, such as Mehtur, Mahato, Pradhan, &c.; but these have not arbitrary authority, and never act without the assistance of a Pangchayit, that is the advice of the leading men of the tribe. In large towns each trade has a Chaudhuri, and in smaller places there is a Chaudhuri for the whole market; but, as in Behar, the chief object of these people seems to be the fleecing of travellers.

Formerly all transgressions against the rules of caste, high or low, were punished by fine, of which the Rajas took a part; but since the English government this has been stopt, and nothing is extracted, but the entertainment given to the Pangti in the high castes, or among the low to the assembly of the tribe called here Bhat or Chatai. There are certain hereditary officers called Dharmadhikars, who point out the penance that must be performed by those who accidentally kill any animal of the sacred kind. The Dharmadhikars are all learned. If the heir neglects study, another man is appointed by a Pangchayit, or an assembly of Pandits, Rajas and other leading men. The accidents are so few, being chiefly when the animal happens to die with a rope round its neck, that the emolument must be quite trifling.

Small Sects.—In the accounts of the districts hitherto surveyed, I have included among the small sects the Sikhs, although I had occasion to learn, that in Behar they are more numerous than those who worship any of the five great gods of the Hindus, and that they are by all admitted to be orthodox Hindus (Astik). I now clearly perceive, that they should have been placed among the Panths, or those who follow new routes to heaven; but still, for the sake of uniformity, I shall mention them in this place, having nothing new to offer on the subject.

The doctrine of Nanak in this district has indeed made

much less progress than in Behar and Shahabad, nor does any sage of this sect possess considerable wealth or power. It is however one of the least obnoxious to the Brahmans of all the new routes, as in no respect interfering with the gains of the Purohits. The whole sect here consists of Kholasahs, who have 17 meetings, and eight persons who pretend to be sages, but have given way to the frailty of the flesh, and taken wives, on which account they are of course little respected.

The sect of Jain is confined to some of the rich merchants from the west of India, very trifling in number, but forming a flock able to be copiously milked. They have two temples (Dewhara), one at Gorukhpoor, and another near Bhagulpoor. No priest (Yati) resides at the former. I have nothing new to offer on the subject. No christian families can be said to have settled in the district, there being none except Europeans, either in the Company's employ, or as mere merchants come for a time, and intending to leave the place, as soon as they conveniently can.

CHAPTER V.

NATURAL PRODUCTIONS. WILD ANIMALS, BIRDS, ETC. VEGETABLE KINGDOM.

ANIMALS.—In the extensive woods and plantations of this district monkies are very numerous. The black Indian bear is not uncommon in woods and fields. Tigers of the striped kind are still numerous; but the leopard or spotted kind would seem always to have been rare. When the English took possession of the country, the former were very bold and numerous, soon after that event a sentinel having been carried off even in the middle of the town of Gorukhpoor. The native officers of police in many places say, that until of late they frequently were disturbed by tigers prowling about the guard house (Thanah); but, except at Dhuliyabhandar and Pali, they now are no where so bold, and several of the European gentlemen at the station, especially those in the civil service, having been keen sportsmen, the number of tigers has been very much reduced, although they are still on the whole more numerous than in any of the districts hitherto surveyed. The most terrible catastrophe from the violence of these animals, of which I have ever heard, is said to have happened in the Fusli year 1176 (A. D. 1769), which was a year of famine. Most of the herbivorous animals having then perished, the tigers were famished, and fixing in great numbers upon the town of Bhewopar, in a very short time killed about 400 of its inhabitants. The remainder fled, and for some years the town continued deserted. It is said that the tigers still may annually kill about seven or eight people, and 250 head of cattle, although it is alleged, that they are not $\frac{1}{10}$ so numerous as when the English came. Some people allege, that in consequence of this destruction the wolf and deer have become more numerous, and that, therefore, the destruction of the tigers has done no good. Others however admit that this is a mistake, and that both they and their cattle now live in much greater security than formerly, while the deer were then fully as destructive as they now are.

The natives of this district reckon four kinds of tiger (Vagh). 1st, Babbra, which is white, has very long hair about the head, and is the largest of all. It is very rare, nor have I met with any one that has seen it, but I heard that one was killed by Digvijay Raja of Bhewopar some time before the English took possession, and the animal is said to be occasionally seen by the cowkeepers. From the circumstances of the long hair about the head, and of the animal having no spots, I should have imagined that it was the lion; but the people all say that the colour is pure white. It neither attacks men nor domestic animals. The animal killed in Dinajpoor, and of which the skin was sent by the Marquis Wellesley to Sir Joseph Banks, was probably of this species. 2nd. Nongiyachhor or the royal tiger, which lives chiefly among reeds, or in thickets of the rose trees, that grow on the banks of rivers and lakes. It is in the rainy season chiefly, when driven from these haunts by the floods, that they enter the villages. The people of Lotan, where until lately these animals were very numerous, allege, that the female breeds once a year, and at each time she produces from three to five young. It frequently however happens that she kills some of them, as in play they scratch her, and her temper being very irascible, she then gives a fatal blow. This circumstance I think exceedingly doubtful. 3rd. Chita or leopard. The people of Nichlaul talk of a small kind of tiger called Ghunggala, which they say is not larger than a dog, but attacks both man and beast. It is found only on the hills, or in their immediate vicinity; and whether it be different from the common leopard I do not know, because little reliance can be placed on their speaking of its size with precision. If it is no larger than one of the common country dogs, like the shepherd's dog of Europe, this animal is probably the ounce of naturalists, an animal of which the existence in India is rather doubtful. 4th. Tenduya, a small spotted animal coloured like a cat. It lives on trees, and is probably the Felis Bengalensis of Pennant, which agrees with the foregoing circumstances.

I heard nothing of the hyæna, but the wolf is said to be pretty common, although I could not procure one either dead or alive. It is said to have become more common since many of the tigers have been destroyed. It carries away calves

and kids; but I have not heard that it has here carried away any children.

Jackals (Siyar) are numerous, although less so than in Bhagulpoor. This animal is frequently attacked by hydrophobia, and several people almost every year perish from their bite. The people imagine that the disease lurks until the first thunder after the person has been bitten, and then makes its appearance. It is said that there is a peculiar kind of Siyar called Mordahkhor or carcase eater, which preys on Muhammedan corpses; but all jackals undoubtedly use this food. It is however said, that this animal has a longer and slenderer tail than the common jackal, but I never could procure a specimen. The small Indian fox is not very common.

Porcupines (Sahi) are found in every part of the district, but are not very numerous. Some few Brahmans and Rajputs eat them; but in general this food is rejected by the pure and high tribes of this district. Hares are still numerous, but formerly swarmed, and were very destructive. They are much eaten, and are taken by dogs and nets, or even knocked down with sticks. Wild elephants are still very destructive, although their number has been considerably reduced since the English took possession; nor do they ever appear in very large herds, and it is chiefly solitary ones that come far south. These however are the most dangerous,* and they every year kill four or five people, although the herds do no doubt most injury to the crops. Single ones are still often seen within a coss of the town of Gorukhpoor, and at times the road through the forest east from thence is rather dangerous. Some villages even in that direction have lately been deserted from fear. Near the hills I observed several fields, the grain on which these animals had totally destroyed. Some are caught by the Raja of Butaul, the Raja of Gorkha, and the Begum at Fyzabad, who have female elephants trained for the purpose of taking them by ropes and nooses. Other persons also secure a few in pitfalls; but the whole number annually taken is inconsiderable, and the people are very unskilful in the management of the pitfalls, as they are not always able to secure the animals after they have fallen

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* In Ceylon I was told that the *Solitaires* were outcasts from society, and being thus enraged, became very savage and destructive.—Ed.

in, that is to say, kill them in the attempt. On the whole not above eight or ten are annually secured. Those who watch the fields to scare away the elephants, for they never attempt to kill them, raise a small mound of earth by surrounding the space with a deep and wide ditch, and on this mound they build a small hut, where they burn a fire, and make as much noise as possible. The ditch and hut would certainly be little security against an enraged elephant; but, as no violence is offered to the animal, he never attempts to overcome the resistance which the ditch offers, and is generally although not always scared away by the noise and light. The elephants here frequent chiefly the forests, and seldom come on the open plains, except at night. The rhinoceros is not so numerous as the elephant. The farmers have succeeded in reducing very much the number of wild hogs. The wild buffalo is said to be very numerous, and to be seen in herds of from 2 to 300. It is reckoned very dangerous to meet with solitary males, which have been driven from the herd by a stronger competitor for female society, for these are apt to wreak their vengeance on whatever they meet, and they are said annually to kill three or four people. Even the tame males under similar circumstances are very dangerous.

There are, it is said, a good many kinds of animals included by the natives under the generic name Harin, and the number is very great indeed, but almost the only ones that are commonly seen, and no doubt the most numerous is the ordinary Indian antelope, with long spiral horns. In the uncultivated bare plains of this district, and even in the wastes covered with long harsh grass, where this is not too close, the number of antelopes is enormous, and often resembles rather the flocks of sheep in a pasture country, than herds of wild animals. Being much pursued, they are however very shy and cunning. The Hindus here in general eat both sexes, but some of high birth imitate the Bengalese in rejecting the female. In February I observed several herds that consisted entirely of males, this being the season when the young are produced. It is alleged, that formerly the whole country being covered with long harsh grass swarming with muskitoes, the antelope bred only once in two years; but since much has been cleared, and the number of muskitoes reduced, it is alleged that they breed every year. This I cannot positively

deny, but I doubt very much the accuracy of the observation. There are several varieties of deer.

In order to procure these different animals, during the whole time that I was in the district, I kept a man to shoot, and for about a month while in the wildest parts, I hired two men, who made a profession of killing deer, but the whole produce of their labour were two common antelopes, of which perhaps they saw 1000 every day. Near the woods the axis or spotted deer does some harm, but the common antelope is the pest of the country, and to prevent its depredations requires the care of the farmer night and day. Besides watching their fields, they sprinkle the crops with an infusion of cow dung in water, for which all the deer and antelope kinds have a great aversion. This operation, to be effectual must be repeated daily, which is attended with great trouble. Even the wild buffalo rejects the crops, with which this precaution has been taken. It must be observed, that neither elephant nor deer disturb any kind of pulse.

Very few nets are used for taking deer. They are pursued chiefly with the gun; but the Bhar and Musahar use arrows poisoned with the root, which comes from the snowy mountains, and is called here Singgiya Mahur. These are the only people, who sell venison, except two Chamars, who purchase from them, and three or four Baheliyas or professed hunters, who chase for sale, but by far the greater part used is killed by the chiefs for their amusement, or by farmers for their own pot. In the rainy season these often assemble in crowds with the village curs and sticks, and, the deer being then confined by the floods, and terrified by the astonishing noise, they succeed in knocking some down. Porpoises are common, not only in the great rivers Sarayu and Gandaki, but in the whole course of the Rapti and Buri Rapti within this district. The Mureri fishermen alone eat them; but on account of their oil all catch them, both in nets, and by the gig or harpoon. The skill exerted in either way is so trifling, that the oil is very dear, and is used only as an external application in Rheumatism.

There are in the district a great many birds of prey, and all the Rajas, that can afford it, are passionately fond of hawking. The finest hawks come from Nepal. The largest and most valuable is a Goshawk called here Baz, which is the

female, and her male is called Jorra. The former sell from 25 to 75 rupees, and the latter from 10 to 40. They do not require to be hooded, as all the others do. The Baz takes cranes, wild ducks, bustards, and partridges. The Jorra pursues all these kinds of game, except the crane. Peacocks in some parts are very numerous, in others scarce; but they are eaten by several of even the pure castes, although most of the Hindus consider them as sacred. Partridges and quails are very numerous. The latter are not tamed for fighting. The number and variety of water fowl is astonishing, and more use of them is made, than in any of the districts hitherto surveyed. The natives eat a great many of the waders, and the fishermen on the Bakhirajhil catch a great many birds, ducks, grebes, and coots, which in winter come from the frozen regions of the north, and they are able to dispose of great numbers. The ducks, which seem to be either the same, or at least very nearly allied to the Pochard, Pintail, Tufted-duck, Nyroca, red crested duck, and Gargany of Latham; and the Grebe, which that distinguished ornithologist calls Tippet, are caught by nets. I could not see the operation performed, because it only succeeds in dark nights; and, when I was on the spot, it happened to be full moon. But a wide long net is stretched vertically between two canoes with its lower edge turned up, so as to form a bag near the water. Other canoes go, and disturb the birds in distant parts of the lake, driving them before them towards the net or row of nets, for several are usually placed in a row. Whole flocks are entangled at once, dropping into the bag and are immediately secured by lowering the upper side of the net. The coot, which does not seem to differ from the kind, that Mr. Latham calls common, is taken in broad day. It is a tame bird, and allows a canoe paddled slowly to approach near, and usually, to save the trouble of rising, which it does with difficulty, it dives to allow the canoe to pass. Three or four canoes therefore paddle towards a coot, and when it dives, stop over the place, the people looking round, until they see it rise, on which they immediately set up a shout. The bird terrified at this, dives again immediately, and remains until it is much exhausted, so that, when it rises, it is neither able to fly nor to dive immediately. The people indeed give it no time to recover, for, by carefully observing,

they perceive some air bubbles escape from the poor animal, just before it rises, and are prepared to seize its head as it reaches the surface. Such haste is not however absolutely necessary, as one, which they caught in my presence, was not able to move for several minutes after it was taken into the canoe. When it had revived, I threw it into the lake; and with the utmost stupidity it immediately dived, and remained again below until quite exhausted; but, as we had removed to a distance, it recovered, and then took wing. One gentleman at Gorukhpoor, by my advice, raised a small house, adjacent to a pond, covered by a net, as a receptacle for the birds of the duck kind; and, having secured a great many, found that they suffered the hot season very well, became exceedingly fat, and were very delicious fare.

The European gentlemen here, so far as I saw, do not use the kinds of thick-billed larks, that in Behar are called Ortolans. The birds most destructive to the crops are paraqueets (Suga) in enormous quantities, and of several kinds, the Philippine grosbeak (Baya), the peacock, in some parts several kinds of turtle dove, the wild pigeon, the common crane, the jackdaw, and the Ledar. By some this is said to be a kind of duck called Silli in Bengal and Behar, and usually called by the English the whistling duck, from the shrillness of its call. Others allege, that the Ledar is a small Podiceps, called Dobaru in Bengal, which breeds in the rice fields during the rainy season, and retires to the marshes in the dry weather. The peacock in most places here is held sacred among the Hindus, so that none of them kill it. The wild pigeon, which here builds in vast numbers on the trees of old plantations, and consumes much grain, is not different from that which builds in caves and the crevices of rocks all over the hilly countries of India, and in the high precipitous banks of the Yamuna river; and it seems evidently to be the prototype of the kinds that have been domesticated, differing little or nothing from that reared in the pigeon houses of Europe. These birds, and the numerous destructive quadrupeds, require almost every field to be constantly watched. There are many tortoises both in rivers and lakes, and they are eaten by the Mureri fishermen.

Both kinds of the crocodile are abundant in this district. In the Sarayu the Ghariyar, or lacerta gangetica, is by far

the most common, and the Lacerta crocodilus, called here Nak, very seldom does any injury in that river. In the Gandaki and Rapti the Nak or Nakra, as it is called in the sacred language, is by far the most numerous, and is there very dangerous, and annually carries off both men and cattle; nor is there any piece of water so small, nor river so trifling, into which it does not penetrate. The Mureri fishermen eat both kinds, and extract the oil for sale. By others it is used only in medicine; but the Mureris burn it, when they procure more than they can sell. In the Bakhira jhil the Nak is particularly numerous. The fishermen kill them readily, when any person likely to reward them goes to that place; but they make no use of the animal, nor on other occasions do they disturb it, although there can be scarce a doubt, that it is owing to the great number of so destructive an animal, that few large fish are to be found in so large a piece of water. The fishermen in pursuit of the crocodile look for him in shallow parts, where some spots of the land project with channels of water running between. In such places they find the crocodile basking on the land. On the approach of the canoe he retires into the water, but goes only to a very little distance, and by paddling slowly on, and carefully observing the motion of the weeds and air bubbles that escape from his lungs, they soon discover where he is. They then fix loosely, on the handle of a long paddle, a strong barbed harpoon iron, which is joined by a rope to the paddle; and, putting the harpoon gently down, find where the animal is. He is very sluggish, and does not move when they touch his side, so that they draw up the instrument, and thrust it into his back without any dexterity. The animal flounces a good deal, but never attacks the canoe, which one stroke of his tail would instantly send to the bottom. He often, however, shakes out the harpoon, after which he neither seems to have an increase of ferocity nor shyness, but allows himself, as in the instance I saw, to be struck a second and third time, until he is secured, and dragged on shore. He there flounces, and snaps with his horrid jaws in a violent and dangerous manner; but, a large bamboo being thrust into his mouth, he bites with such violence that he cannot readily disengage his teeth, and gives the people time to secure the gag by tying a rope round his jaws. He is then

helpless. In the one, which I saw caught, a ball, fired through his head from a small fowling piece, instantly deprived him of motion, nor did he show almost any sign of sensation, when immediately afterwards the harpoon was torn from his back. On the whole the crocodile seems to be a stupid animal, and to make but a poor resistance, considering his great power, and the tremendous force of tail, jaws, and teeth, with which he is provided. The hardness usually attributed to his skin will appear from the above account to have been very much exaggerated. I have seen the crocodile, however, move with very great velocity, and have no doubt, that in the pursuit of fish it uses great exertions of this kind; nor does it seem to be entirely destitute of cunning, as crocodiles have been repeatedly found lurking in the fords of rivers, through which high roads pass. Of this indeed I saw one instance, and am assured, that it is not uncommon.

I heard of another kind of overgrown lizard called Gohota, which has a head like the Ghariyal, and is of the same size, but wants the serratures on the back. Like the Ghariyal it is perfectly harmless to man and beast, and by most people here is considered as the female of that animal; but others consider it as different. Never having seen it, I do not pretend to give any opinion on the subject, but I never anywhere else heard of such an animal. The people here eat none of the smaller lizards. Serpents are very numerous and destructive. It is said, that they annually kill about 230 persons.

Notwithstanding the great number of rivers and ponds, the supply of fish is neither abundant nor good. This is partly owing to the want of skill in the fishermen, who are able to catch very few in the large or rapid rivers, where the fish is of a very good quality; and partly to the fish in the ponds and lakes being in general small and ill tasted. Even in the Bakhira jhil, the finest piece of stagnant water, the Rohu looses most of his splendid green gold and silver, and becomes of a dirty sable hue; and such fish are in general considered not only as unpalatable, but as unwholesome. The crocodile also is very destructive, so that few fish of a large size are procurable, the smaller ones do not seem to be worth this monster's pursuit. The fisheries, of however little

value they may be, are however private property; and many of them seem to have been given to the Rajas free of rent, as a means of subsistence, when they were deprived of most of their lands, as being either unable or unwilling to pay the revenue that has been demanded. These chiefs, are, however, so jealous of their incomes being known, that in many places they alleged, that they took nothing whatever, in others they acknowledged small presents given at every renewal of the lease, and in others they admitted, that the fishermen gave a share of what they caught; but it was only in Barahalgunj that I could procure any account of what was actually paid for the rent of fisheries; 30 families were there stated to pay 556 rupees.

The fish are caught chiefly in the ponds, lakes, or small rivers, and these become dry, and therefore are chiefly procured in the cold season. Many of them are caught with the basket, or most simple kind of triangular net stretched between two bamboos; many are also caught by narrow semicircular canals, dug so as to form a connection between the upper and lower part of a small river, across which a dam has been thrown, so that, as the waters retire, the fish must descend by the canal, in which they are secured by a basket or bag net. In Bakhira jhil, that seems to be the largest body of water, in which the natives attempt to fish, they use a long net, not above two feet wide. The mesh is pretty large, intended to admit and secure fish of from three to five pounds weight; for in this lake few attain a greater size. One side of the net is held up by a row of dry reeds about two inches long, and as thick as a goose's quill. When the net is thrown into the water, the whole sinks slowly by the weight of the twine, of which it is made, and it sinks in a vertical position, the reeds keeping the side, on which they are, from sinking so fast as the other. The net has a bamboo at each end, both to stretch it and to float the ends. It is let out slowly from the end of a canoe paddling gently along, and four or five nets are usually let out, at the same time parallel to each other, and near the same place, so that the fish, being disturbed in all directions, may strike into the nets with the more force. When the nets have been thrown out, the canoes paddle back to the end first thrown into the water, one man in each making a noise by rattling a paddle

on the gunwale. The nets are then pulled into the canoes, and, if any fish has stuck in the meshes, as it approaches the side of the canoe in drawing the net, it is secured by a bag net fastened to a hoop and pole. This large net is called Chaundhi. When I examined the process, although all the boats on the lake were assembled, we had little success; but there was a great tumult and noise, which probably scared away the fish. Circular casting nets, like those common in India, are a good deal used.

The fishermen of Nichlaul use the Ijar (trees, No. 37), bark to stupify the fish. They make a strong infusion, and throw some of this on the surface of a river or lake.* All the fish, that come to the surface during the first night afterwards, are killed, and collected in the morning. The operation may be repeated in 15 days. Many other plants are used for the purpose as will be seen in the account of the plants; but the exact form of the processes I did not learn. In the northern part of the district a principal demand for the fish seems to be from the mountaineers, who purchase both what is dried in the sun (Sidhli), and in the smoke (Pakli). The fish thus dried are small, and, being far from well cured, are more or less putrescent. The people, whom I saw purchasing, said, that they were intended for the distant market of Malebum.

According to the statements which I received, 395 canoes are employed in fishing, and there are 1625 families of fishermen, besides 80 men in one of the divisions, where the estimate was given in this manner, and not according to families. It was stated that in 702 of these families there were 1325 men, and at this rate the whole number of men will be 3147. Some fish only two months, and a very few the whole year; but, according to the statements received for 1476 of the houses, the average rate of time, for which the fishermen are supported by this employment, is four months and ten days in the year. We cannot allow, that each person makes less than 2 rs. a month, including the tear and wear of nets and canoes. The fish caught, therefore, must sell to the retailers for 27,274 rs., besides as much as will pay the rent. If we

* See my "History of the Colonies" (Demerara), for a similar custom among the Indians on the Essequibo river.—[Ed.]

were to judge by what Barahalgunj pays, this would amount to about 30,000 rs.; but the actual sum levied from the fishermen probably does not exceed the value of one half of the fish taken; and, as the rents of fisheries are usually farmed again and again, what actually reaches the pockets of the Rajas or other proprietors, is probably much less than 27,000 rs. The fisheries in the main channel of the Ghaghra and Gandaki are free; but very few can take fish in such extensive waters.

Farmers of the low tribes catch fish in their own rice fields, as the water dries up; but entirely for their own use, and it is only such as fish for sale that pay any rent, although the farmers often give a share of what they take to their landlord. Most of the kinds of fish found in this district I have already had occasion to mention, but the names used here differ a good deal from those in Behar or Bengal. In the Dewha Rapti and Ami there are small oblong crustaceous fishes like prawns and shrimps. There are also a few crabs.

Insects, especially musquitoes, are more troublesome than in any of the districts hitherto surveyed, and formerly were still worse than now. White ants are very troublesome, especially devouring the roofs of the huts. In the northern parts of the district the natives complain of several kinds of insects or worms that destroy the corn; but I could procure no specimen. It is not every year that they do harm; and, when they appear, the people have no better remedy than the incantations of certain wise men or conjurors called Gurus. The Tangra is said to be about an inch long, and is white, with a red head. It has neither legs nor wings, and eats the roots of the growing rice. The Jamuya is entirely black, and has wings. The Gandhi destroys the grain by attacking it while in a milky state. Concerning the Taba and Khayra I learned no particulars. The honey and wax are collected by the Bhars and Musahars, where such exist. The former in general are held to have a hereditary right to collect all the produce of the woods, paying a trifle to the Zemindars.

The Lack insect is found spontaneous in several woods. A little is collected by the Bhars, and more by those who make it into ornaments; but the quantity procured is very trifling, more from the people not thinking it worth while to

gather an article of so little value, than from its scarcity. In some parts indeed the insect is considered as a mere nuisance, and afflicts the Brahmans by adhering to their favourite tree the Pipal (*Ficus religiosa*), which it finally kills. The remedy, to which these wiseacres have recourse, when a favourite tree is affected, is to cut a branch, on which the insect has fixed, to carry it to Prayag, and to throw it into the sacred stream. On this all the insects on the tree perish. Several decent men declared, that they believed this remedy to have often proved effectual. On being pushed, however, they said, that they had never performed the operation. In general those, who collect the lack, pay nothing; but in Dumuriyagunj it was alleged, that each tree paid from 8 anas to a rupee, and in Bangsi from 2 to 4 anas. Scorpions are very numerous, but their bite never proves fatal. There are plenty of shells fit for making lime; but the demand is very small. The fishermen usually collect such as are required for building. The people, who sell betle, burn and collect what is wanted by their customers.

PLANTS.—The forests and marshes of this district are an excellent field for the botanist, and the latter especially produce a great variety of aquatic vegetables. The inundated land, that is waste, amounts to no less than 480 square miles. Of these 141 are clear; and of the remainder by far the greater part is covered with long harsh grass or reeds, in some places overgrown with wild rose-trees, and in more with Tamarisks. None of the inundated part can properly be called a forest, yet many parts of the last mentioned description contain scattered trees, chiefly of the kinds numbered 37, 39 and 105.

Of the 1355 square miles of level land, that are exempted from inundation, and covered with ligneous plants, probably not above 55 produce only bushes, and 1300 are forests or old plantations, now quite wild, and having many forest trees intermixed. These gradually increase, and finally altogether choke the Mango. The bushes are of the same nature as in Shahabad. The hill is entirely covered with forests, which therefore, allowing for forest trees scattered over the inundated land, may amount to about 1450 square miles. From this great extent, a moister air, and the small number of inhabitants, the woods here are much less stunted than in

Behar or Shahabad; but in some parts all the causes, mentioned as reducing the size of the trees in these districts, operate to a considerable degree; and no pains having ever been bestowed to protect or encourage the growth of the kinds most useful, these are fast decreasing in number and size; so that in three or four years, little or no supply of timber will for some time be procurable, and it is even probable that in no very long time all the useful kinds may be entirely eradicated, although the forests may continue of their present extent.

It has not been customary in this district to demand any rent for fire-wood. Plantations have been carried to the most absurd length, so that those still in good condition amount to about 565 square miles, equal to one-fourth of the whole cultivated fields. The principal vanity indeed of the wealthy natives is directed towards this superfluous and destructive waste of land; for almost the whole of the plantations consists of Mangoes, which from their abundance are not saleable, and the very best wheat fields are daily converting into Mango groves. Government seems to encourage the waste, by placing no land-tax on the ground occupied by plantations. A certain quantity of trees is probably highly useful in a warm climate, as preserving moisture, where the danger of famine arises from want of rain; but the Mango tree does not seem very well suited for the purpose, as, if multiplied to a great degree, it becomes of no value. Forest trees therefore seem to be much preferable, whether they afford valuable timber, or a supply of forage in times of scarcity. The leaves of many trees are of this nature, and perhaps the preference given to the Ficus religiosa; and Ficus Bengalensis may owe its origin to this cause. I have therefore no doubt of the propriety in an economical sense of laying a tax on all fruit trees, or such as yield a saccharine juice. Such a measure has here been adopted with the Mahuya, nor has it been found to diminish the number so much, as to hinder a copious supply from being reared. If it is judged necessary to indulge the natives in plantations free of rent, let the trees reared be those of some use. One difficulty indeed occurs, which is perhaps greater than might be expected. The natives will not in general consent to cut any tree, that has been planted; and it required a very odious

exertion of power to clear so much ground in the vicinity of Gorukhpoor as was sufficient to form a parade, and a kind of breathing hole for the European officers of government. Nor would any one consent to receive a pecuniary compensation for this kind of sacrilege. Several Zemindars have however planted the Sangkhuya, and some of these plantations are now cutting, which would seem to show, that some kinds of trees only are exempted from being lawfully cut. This prejudice renders precaution in the formation of new plantations the more necessary; as, whatever is planted, may be considered as irretrievably lost. It might be supposed, that the interest of the landholder would be a sufficient check, but it is not so. For in the first place, were his interest really concerned, this would not be an adequate check to the dictates of vanity and superstition; but lastly his interest is little if at all affected. He is a mere lessee for three or four years; and, if two thirds of his estate were in plantations, he could only be taxed, on the renewal of the lease, for what remains in cultivation, and the tax is often so heavy, that he derives more profit from the lands in a waste state, which are not at all taxed, than his share of the profit on those that are cultivated. Farther old habits continue to influence the practice. Every Raja was formerly desirous of having his house surrounded by thickets, almost impervious, which secured him in a great measure from the power of a government, the troops of which were little better than the rabble composed of his own vassals. In order to procure such a thicket, a plantation surrounded by a bamboo hedge offered the most ready means, for which a legal pretext could be made, and many of the forests owe their origin to this contrivance. Every Raja almost continues extending his plantations, partly no doubt, from family habit, although he knows, that no strongholds will enable his followers to resist the awful force of British discipline, which he perhaps hopes may soon cease to operate.

Among the variety of trees, the Harra is very common in the woods, and seems to be the same with that of Shahabad. In Lalgunj, where the Bhars collect the fruit for sale, they say, that the tree does not produce every year, but generally at considerable intervals. The young fruit, when still small, is called Janggiharra, and is dried for sale; as is also the fruit,

when full grown, but not ripe, in which state it is called Harra. This degree of growth happens in December, and the fruit does not reach full maturity until the following May; but it very seldom is found in that state, many animals, monkies and large bats especially, preying on it during the long period, which it requires to ripen. The ripe fruit is not saleable. The species of Terminalia or rather Chuncoa, which is called Asan in Bhagulpoor (No. 11) and Behar (No. 10)* is known in the southern parts of this district by the same name. The art of rearing silk worms on it is there totally unknown, although much of that kind of silk is used in the district, and although the tree grows most copiously and luxuriantly. On the skirts of the hills it is peculiarly fine, and natives have sent beams of its timber to Calcutta. Should they be found to answer in building, no tree is more common, nor more stately in India. Both in the Khas and Tharu dialects it is called Saja. Among the natives, at the town of Gorukhpoor a timber brought from the hills, and called Bijaysar, is in considerable demand for furniture. The people of the hills assure me, that it is the timber of their Saja, and totally different from what they call Bijaysal, which is a Pterocarpus (See No. 110).*

The *Strychnos* (nux vomica,) called Kochila, is found in the woods of Rudrapoor, and the fruit is exported as a drug. The Bassia with long narrowish, and the one with obovate leaves, are both very common in this district, the former chiefly in plantations, and the latter in woods; but the natives call both Mahuya without distinction; nor are the valuable productions of the two kinds in any respect different. I have little to add to the observations, that I made on this tree in the account of Behar and Shahabad. I still continue to suspect, that the thick expressed oil of the kernels is the substance, of which the Chinese make their candles, and doubt much of the Croton sebiferum or Tomex sebifera yeilding any such substance. The natives of the hills, whom I consulted, said, that they have only one species of this tree, and that it is the same with that of the plains; nor have I been able to discover any sufficient marks, by which the

* Dr. Buchanan's description of the trees of these districts is very voluminous, and the drawings expensive. They are necessarily omitted, but the Nos. are retained for future reference. [Ed.]

plant described by Dr. Roxburgh in the Asiatic Researches is to be distinguished from the common kind. The oil however on the plains is only used for the lamp; and I doubt much, whether it is not owing to a scarcity of better oil, that the mountaineers have been induced to eat, what Dr. Roxburgh calls butter. The flowers of the Bassia are here eaten as a dainty by the rich, and never serve as a succedaneum for grain. The favourite preparation is a kind of pudding called Laphchi. It is made by infusing the flowers in water to extract the saccharine matter, which even without fermentation is of an inebriating quality. The infusion, being strained, is boiled, and wheat flour is added to form the pudding. Cattle eat the flowers readily, after the sweet has been extracted for distillation. Those who are employed to collect the flowers, are commonly allowed from one half to one-fifth, according to the season of the year; that is when the flowers first begin to open, and when few remain, so that the gatherer can procure only a small quantity, he is allowed one half; but when the trees are in full blow, and, vast quantities falling, he can with little trouble gather a great deal, he is allowed only one-fifth. On the whole the allowance does not exceed one-fourth of the gross produce. In the eastern parts of the district I am told, that the usual price is about 5270 Payas weight, or 134 lbs. for a rupee, while in the western parts where the trees most abound, the price varies from 3600 to 6000 p.w. or from about 91 to 152 lbs. The produce of each tree is stated at from about 12½ lbs. The tree does not bear until from 12 to 20 years old, at least in any quantity worth while.

The Ijar of Shahabad (No. 34,) in Parraona is known by the same name; but in Amorha it is called Ingjan, a word not essentially different from the Hijal of Ronggopoor (No. 71) On the edges of the marshes in this district it is a very common tree, its roots being often under water the whole year, and in the floods the whole trunk is often covered. It grows however very well on lands entirely exempted from inundation. Its bark stupifies fishes. The Gardenia has a saponaceous fruit, which is given to oxen and cows, and is said to increase the milk of the latter. On this account it would seem to be a valuable plant, especially as it grows on the worst soils, and produces much fruit. It is very common.

The mountaineers rub the wood of the Nauclea Parvifolia

to powder, and, mixing this with water, apply it to their skins, as other Hindus do sandal wood. The powders are not to be distinguished by sight, but that of the Nauclea has no smell. The Bhorkund of the Bhagulpoor list (No. 191), is here a very common tree. I have not yet seen the flower; but have no doubt that it is the Cinchona excelsa of Dr. Roxburgh, although from the structure of the fruit, I doubt of the propriety of classing it in that genus. The fruit remains on the tree during the whole dry season, ripening late in spring, when the tree is quite bare of leaves.

In the forests near Basti I found a tree called Asogi. It had neither flower nor fruit; but, so far as I could judge from the leaf, it seemed to be the same with the Sapindus alternifolius of Willdenow. The fruit is said to be esculent. The native name of the Shorea robusta or Sal of Bengal is here written Sangkhuya. It is the most important tree in the forests of this district, and was once everywhere the most abundant; but the demand from Calcutta, and the want of care in the management, have reduced the quantity so much, that very little of a large size remains, and in two or three years if things continue as at present, the forests will be completely exhausted. Besides the custom of cutting only such trees as are wanted, and allowing the young growth to be choked by the useless trees that remain, the principal check to the growth of the timber here, is the custom of extracting the resin here called Karel. The wretched Bhars do this without commiseration, on the finest trees. They do not indeed make the incision quite round, so that for some years they do not absolutely kill the tree; but the rain water, which enters by the incision, always spoils the parts below, which in fact form the best end of the stick, and the rot is often communicated to the upper parts, occasioning a heavy loss to the wood-cutter, who after having felled and in part squared the timber, finds it not worth a farthing. The resin is only extracted every other year from the same tree; and after three or four extractions, the tree if not previously cut, dies exhausted. The extraction of this resin should therefore be altogether prohibited in this district. An abundant supply may be procured from the mountainous countries south from the Ganges, from whence the timber cannot be exported on account of the expense of carriage. The Bhars make their incision in the hot season, and collect the resin, when the

periodical rains have ceased, so that they visit each tree only twice. Each, it is said, gives from 48 to 120 paysas weight, or from about 1¼ to 3 lbs. The burning the grass and leaves in spring stunts many of the trees, and prevents them from attaining a full growth. One remarkable circumstance concerning the Sangkhuya forests of this district, deserves particular attention. In the woods on the plains, this tree spreads so as to afford crooked timbers for ship building, while on the skirts of the hills it grows perfectly erect, and is fitted for beams and plank. I am quite unable to point out the causes of this circumstance, whether it is to be attributed to a peculiarity in the nature of the tree, to a peculiarity in the soil, or to somewhat peculiar in the trees, that accompany the Sangkhuya in the two places. To ascertain which of these causes, or if any of them produced the effect, would require a much longer time for observation than I passed in the district; but the subject is of some importance, as it is very possible, that a similar cause might be found to operate on the other trees employed in ship-building, and might be applied with great advantage to the public.

Although very tolerable oranges are raised at Ayodhya, and most delicious ones in Nepal, I did not see one tree in this district; for the natives are totally careless in gardening, and their only fruit is the mango, very few of which are exempt from being sour, stringy and resinous, so as to be altogether insufferable to an European. The fruit of the fine genus Citrus, which are reared, are sought after by artificers, who use their juice, and not as a grateful acid to cool thirst, or season food. For both purposes they are excellently adapted; but such do not suit the Hindu taste.

The peach, in this district, is to be found in the gardens of a few natives. The pomegranate is abundant. I observed neither apple, pear, nor plum, all of which would bear the climate.

The Mimosas do not form so large a proportion of the woods here, as on the hills south from the Ganges. The Kayar or Mimosa Catechu in this district is by far the most common tree of this genus, and near Parraona especially, some woods contain little else. The soil, which it seems to prefer, is seldom good, and great advantage in the manufacture of the drug would arise from having entire woods composed of the tree, which should be regularly cut like coppices, when they had arrived at a proper size. The Catechu is of a good

quality, and is made in the usual manner, partly in round, and partly in square masses. It sells on the spot at from 6 to 8 sers (96 p. w.) or from about $14\frac{1}{3}$ to $19\frac{1}{2}$ lbs. a rupee.

The tamarind, called here Imli, is pretty common throughout the cultivated parts of the district, and its fruit is in general use, when it can be procured; but the monkies seldom allow any to ripen. The Parkinsonia aculeata, as every where else in the Gangetic provinces, is spreading with a rapidity that is surprising, as I have heard no particular utility ascribed to the tree. It certainly however is very ornamental. The Rotleria tinctoria is here very common; a great quantity of the red powder that covers its fruit is collected for sale as a dye. The fruit is gathered before maturity, when it is most fully covered with the powder; is then dried from three to ten days, according to the strength of sun and wind, and then is beat with a stick, which separates the powder. If the fruit were allowed to ripen, it would break in the beating, and the fragments of the capsule would be difficult to separate from the dye. This red powder is used also as an anthelmintic for cattle, especially for the buffaloe, which in the rainy season is much troubled with worms; two or three tolas, that is about from six to nine drams, form the dose.

Three hundred and thirty-nine miles of inundated land, and 1381 square miles exempted from that accident, besides broken corners, forests and plantations are in pasture. Some of the inundated land has trees scattered among the reeds, or rather high coarse grass, with which almost the whole of it is covered. Of the high land perhaps $\frac{2}{3}$ are covered with short grass, and $\frac{1}{3}$ with a kind of grass, by far the most common reed in the country; and, although small quantities of other kinds are intermixed, the kind most worth notice is the Andropogon. In this district, as wherever the Hindi language prevails, the leaves are called Katra, the flowering stem or reed Siki, and the sweet smelling root Khaskhas or Jhar. The leaves are the thatch principally used in this district. The roots are used by weavers for the brushes with which they smooth their warp. In the marshes grow various species of Arundo. Spontaneous plants are very little used in diet. In the marshes are considerable quantities of wild rice, which is of the same kind with that which I saw at Gaur. It is carefully gathered; for being reckoned un-

commonly pure, it is sought after as an offering very acceptable to the gods.

In ordinary times no substitutes are used for grain except by the wretched Bhars, once masters of the country. These use some wild yams; but of what species I did not learn. The only one, which I had an opportunity of examining, seems to me to have a strong resemblance to the Ubium nummularium of Rumph (vol. 5, table 162 and 163). It is called Bandriyaru. It has a small woody bulb, beset on all sides with long thick fibres. At the proper season there grow from this several fleshy cylindrical roots, about an inch in diameter, and a cubit long. These are the roots eaten. The Gength of the Bhars is a round root, but it is said to have ternate leaves, and is probably another Dioscorea; but I did not see it. In times of scarcity, to which however this district has seldom been exposed, the people have recourse to the kernels of the mango and the seed of the Sangkhuya. A few succulent vegetables are occasionally collected for curry, but to a very trifling extent, and not essentially different from those mentioned in Shahabad. Those that I saw were the Momordica muricata called Bankareli, a wild Luffa (Parwar), a species of *Polypodium* called Kongchai, of which the young shoots are eaten, the Sagittaria sagittifolia called Niusa, and the Sparganium ramosum called Gongd, used in the same manner. Besides these are used the fruit of the Perar, and of the Dillenia called Agai.

The same may be said of the leafy vegetables. Those that I noticed were the common green *Chenopodium*, the *Solanum nigrum*, with black berries, the *Marsilea quadrifolia*, flowers of a fine Indigofera, the *Lathyrus Aphaca*, the *Vuia Sativa*, and an Eroum called Akri. The three last grow spontaneously in corn fields, but are collected as greens, or as forage for cattle, and their seed is eaten, when it ripens among other pulse. The Dhara, which grows in the rainy season, is said to be much used, but I did not see it, when in the district. The plant shown for it, by a person from thence, is the Cassia Tora. Acid seasoning, as every where in the western provinces, is very little in use. The aquatic plants Nelumbium, the two Nymphæas, the Trapa and Scirpus mentioned in the account of Puraniya, are all very common in the marshes of this district, and are all used; but none of them

are improved by cultivation; and, as no rent is demanded for them, little attention is bestowed. In China every inch of these marshes would be occupied by the Nelumbium or Trapa, both of which are there cultivated with the utmost care. All the kinds of fruit used raw have been mentioned in the account of the forests. Of the spontaneous plants of various kinds applied to various uses the following are the most remarkable.

In the woods of Parraona the Pipalmul is a species of Piper, the root of which is collected for exportation in considerable quantity. It is usually said that this root, which is sold, is that of the piper longum; but whether or not this is universally the case I cannot say, as I saw the Pipalmul only in leaf, and no one from these alone can venture to ascertain the species in a genus so difficult, and so little known. The fruit, however, is said to be much smaller than that which comes from Yasor in Bengal, which is the true long pepper of our shops; but then the plant in Yasor is cultivated, and here is spontaneous, which may account for the difference of size in the fruit, without supposing a specifical difference in the plants. The right of collecting this drug has been farmed to the same merchant that has farmed the dye called Sinduri. He gives 2 sers of rice in the husk for one ser of the root, as it is dug; but it loses one half in drying, and the trouble of this operation may render its price to him nearly the same with that of the dye, that is, it may cost him one rupee for 39 lbs. A little is also collected in the woods of Bangsi.

The Gajpipar is the fruit of a species of Calla, described by Rumph (volume 5, table 181, figure 2), under the name of *appendix arborum*. It is used in medicine, and is an article of export. The flowers of the *Grislea tomentosa* of Dr. Roxburgh are used as a purple dye. At Lalgunj they are collected by the Bhar, and when dry, 4 or 5 *mans* (each about 31 lbs.) are sold for the rupee. If any considerable quantity was required, especially if collected clean and garbled with care, the price of course would be much enhanced, but it would be an object of some use to try how far it could be exported to Europe. The bush at Lalgunj is called Dhaotha.

The *Cæsalpinia*, which in this district is called Tairi, and is used by tanners, is the same that is mentioned in the account of Puraniya under the name of Taiyar. The pods of

the Mimosa saponaria, called here Isrol and Hangis, are collected for washing the hair. The large climbing *Bauhinia*, mentioned in the account of Bhagulpoor, is very common in the woods of this district, where it is called Bangor and Meharaun The bark makes ropes, which are very coarse like those of the *Butea*, but are much used. The leaves serve as parasols, and the seeds are esculent.

The real *Bauhinia scandens* is very common on the skirts of the hills. This very singular plant is excellently described by Rumph under the name of Folium linguæ, and may be readily known by its branches resembling a double barrelled gun, and singularly twisted like a serpent. It is owing no doubt to this alone, that it has obtained the credit of scaring these destructive reptiles. No native has ever observed either flower or fruit, the reason of which probably is, that these are produced only by the branches, which have reached the tops of the highest trees, and are thus exposed to the sun. The principal stem is often as thick as a man's body. I am told, that on the hills the people sometimes conduct branches over the chasms, through which rivers pass, allow them to twine round trees on the opposite side from the roots, and thus form a perilous swinging bridge, that lasts for years.

The Justicia Adhatoda, called Arus in this district, is very common in the thickets about villages, where its growth is encouraged, as it is supposed to purify the air, rendering it more salubrious. If so it is a valuable plant, as it thrives in the shade even of bamboos, which are generally thought to occasion sickness. If this latter circumstance be well founded, some credit is probably due to the Arus, as many villages in this district are surrounded by bamboos, and yet are very healthy, the bamboos being accompanied by the Arus. The charcoal prepared from the stems of this shrub is reckoned very good for making gunpowder.

The *Medicago alba* of the Encyclopédie grows on the banks of several rivers, and especially of the Rapti below Gorukhpoor. Its bark is separated by steeping like that of the Crotolaria juncea, and is made into ropes. It is called Susuna.

MINERALS.—The only rocks which are to be seen in this district are on the banks of the Gandaki, on which the structure of the mountains immediately adjacent to the plain may

be studied in the most satisfactory manner. The blocks of stone at the foot of the hills, and on Maddar, are all detached pieces, intermixed with soil; and below the mouth of the Sonabhadra, opposite to Sivapoor, the channel of the Gandaki contains only water-worn stones or pebbles of different sizes. The lowest ledge that I observed runs into the river, from the west side, a little above the mouth of the Sonabhadra. It is calcareous, but has become entirely rotten, and forms a mass like indurated clay. Among the loose blocks in the channel, however, I found some that had evidently come from a similar rock, but that retained entire their stony structure. They are a fine grained lime-stone, resembling in its appearance the petrosilex. In the abrupt banks of the Gandaki higher up the great mass consists of clay and sand, in some few places of which are imbedded small rounded fragments of stone, chiefly of quartz, such as are very numerous in the channel of the river; but in general the sand and clay are free from admixture, and appear to me to be rocks in decay. The rocks are disposed in parallel strata running nearly north and south, but the north end inclines more or less to the west, and the south end to the east. The strata dip towards the east at an angle of about 45° or 50° from the horizon. These strata are no where thick, and have interposed between them large strata of clay or sand, forming, as I have said, the great mass of the hills. Except the calcareous ledge above mentioned, all the other rocks that I noticed consist of fine grains of white quartz and felspar, with a little black mica or hornblende. The rock, as far as Bhelongji, is no where harder than sandstone, and is evidently in a state of decay. Naturalists, according to their theories concerning the origin of things, will call it granite, regenerated granite passing into sandstone, &c. &c. About a mile above Bhelongji is said to be a quarry, where the rock is not decayed, and the stones with which the old fort at Sivapoor was built, are said to have been brought from thence. They are evidently of the same structure with the decayed strata which I saw; but, although they cut well, are very hard, and have resisted the action of the weather since the time of Rani Karnawati without the least appearance of decay.

The sacred stones called Salagrama are found occasionally not only in the channel of the Gandaki as low as Trivini, or

the junction of the Sonabhadra, but also on the adjacent hills; and a Brahman, digging a well at Lakshmipoor near Sivapoor, perhaps two miles from the river, found one in the bottom. In the channel they are far from scarce, as in a short time, one forenoon, my palanquin bearers found four, two without any apparent impression, one with the impression of an ammonite, and one containing several turns of the petrified shell. The number however is said to increase in the channel the farther up one proceeds, and to be very great the whole way between Damodarkund in Thibet, where the river rises, and the warm springs of Muktanath, where it enters the dominions of Gorkha. It is however probable, that the whole comes from the falling down of the banks, and that the river has had nothing to do with their formation. They indeed resemble water-worn pebbles, being roundish or oval masses more or less flattened. It may be supposed, that they are parts of a rock containing imbedded in it many ammonites, or having cavities impressed by that animal, and left empty by its decay, and that fragments of this rock falling into torrents are rubbed round and smooth by the action of the water; for many of them contain no ammonite nor impression. Those most valuable to the natives are such as, when found, have no evident mark of having contained the animal; but by rubbing the external crust, a hole is found, opening into an impression, that is hollow, and marked by the complete animal. The stone is of a siliceous fine grained black nature, and serves as a touchstone; and where the ammonite remains it is of the same nature, and has entirely lost its calcareous quality.

The strata of the plains, composing almost the whole district, consist of clay and sand. The clay fit for the potter's wheel seems to be found only in small detached beds, which are usually discovered in digging tanks; but in these it has always been found in abundance; and, except on the banks of the Ghaghra, the ware it makes is seldom brittle. The most common clays are of three kinds, one blackish, which is called Kurauta; one reddish called Suruki; and one yellowish called Piyari. All are stiff, but the first is chiefly used by potters, and all sometimes contain siliceous pebbles. Some of the red and yellow, called Kabes, is used as a pigment in making potter's ware, as described in the account of Dinaj-

poor. The sands are of various colours, black, dark brown, yellowish and whitish, intermixed with mica; but this is chiefly found in the beds of rivers. The yellowish sands, even as low as the middle of the district, often contain siliceous pebbles, and these are also found among a black clay at the very southern corner.

The earth in many parts is strongly impregnated with soda, which effloresces on the surface. It is every where collected by washermen, and those who make glass ornaments; but I no where found any one who would confess that he prepared it for sale. I know, however, that a good deal is sent from Gorukhpoor to the east, under the name of Reher matika phul, or flowers of saline earth. It is similar to that prepared at Nawada, in the district of Behar, and is probably prepared in the same manner. The most extensive fields of this saline earth, of which I heard, are in the division of Dumuriyagunj. I examined with a good deal of care the appearance of one of the fields about two miles north from Bangsi. The whole space there, between the Rapti and Ghaghar, is a level, destitute of trees, deeply covered with water for about two months in the year, and has every appearance of having been at different times swept away, and replaced by the action of the rivers. The soil is light, and filled with fibrous roots, as usual in such lands. The soda effloresces on a considerable surface towards the Ghaghar, and on a place that is very low, being partly in an old channel, some of which even in January contain pools of stagnant water. The surface on which the efflorescence takes place, is very sandy. In this I dug a well, and found about one cubit of this sandy soil. Then about four cubits of a brownish earth, containing more clay. Then 1½ cubit of a yellow sandy slime, in which the water rose. It was clear, and had not a saline taste; but a slight effervescence might be perceived on adding a mineral acid, and the effervescence became strong, when the water was reduced by boiling. The brown earth also effervesces slightly.

Except what is mixed with the nitre formed in villages, no culinary salt is known to be produced in the earth of this district, nor does it contain any of the Khari, or sulphate of soda. In Pali, indeed, there are some places which are said to produce a saline earth, which cattle lick, and this may either be on account of culinary or purging salts; but the earth is called

Reher, the name given to that containing soda. Owing to a very heavy rain, that lasted while I was in that division, this saline efflorescence could not be seen. The nitre effloresces only in villages. It is alleged, that when the soil is of a nature that parts quickly with water (Bangri), the saline efflorescence produces ¼ more salt, than when it has been scraped from a soil that is retentive of moisture (Bhat), and that the salt procured from the former is cleaner.

On the banks of the larger rivers the concretions of calcareous Tufa, called here Gunti, are abundant, not only in detached nodules, but in a kind of rocks, or thick crusts, that in some places run under water far below the lowest ebb in the dry season. The air is not therefore so necessary to its formation as I thought, when I wrote the account of Shahabad; but I have not yet found reason to alter my opinion of this concretion being formed on soils that have been moved by a river. The calcareous tufa is sometimes burnt for lime.

The springs of water are in as little request as those in Puraniya, although there is a very fine one at the source of the lesser Gandaki; but excellent well water is every where procurable; nor are the wells in general deep. They are in general deepest near great rivers, but even there never exceed 30 cubits, and at a distance from rivers from 8 to 12 cubits is the most usual depth near the middle parts of the district, towards the west they are in most places from 20 to 25 cubits. It is alleged, that near the Gandaki the wells are shallower than at some distance from its bank, they being from 8 to 10 cubits near the river, and at a distance from 14 to 20 cubits deep. Those near the Gandaki are supposed to receive their supply of water from thence, as those who drink of their water, although apparently good, are subject to the swelling of the throat, which its water very evidently communicates. The water of the wells at a little distance farther from the river, produces no such effect.

Some few wells are of the saline nature called Khara, mentioned in the accounts of the districts formerly surveyed; but this kind of water is not near so common as in Behar, nor have any containing culinary salt been discovered. Such wells of Khara water as exist, are chiefly near the Ghaghra.

The water is found often in sand, and often also in clay, nor does there seem on that account to be any difference in

its quality, which, when the well is in repair, is clear and palatable, even although found in black clay. Where the water is found in sand, unless the well is lined, it is very soon choked. Potters' rings are not here in use for this purpose; but near the forests many wells are lined with circles of wood, laid one above the other. Most wells are, however, lined with brick, laid upon a flooring of plank, which supports the foundation, and prevents the sand from rising. The tree chosen is the Jamun, which, under water, is found very durable. A good well of this nature, about 27 feet deep, costs 50 rupees at the capital, and about 40 in country places: but many rich men, from ostentation, expend from 200 or 300. Such wells are rather wider, but perhaps not better; and by far the greater part of the money is wasted on the religious ceremony of purification; even in the cheapest, somewhat is always lost in this idle manner.

In some places, as Parraona, it is observed, that where the soil is retentive of moisture, the wells are not so deep as where it dries quickly, although in both cases the water may be found in similar strata. Whether or not this circumstance is general, I have not learned; nor do I know the nature of the connexion; whether the depth at which the water is found is to be attributed to the nature of the superincumbent soil, or whether the nature of this arises from the depth of the subjacent water. The water in digging wells seldom rises with great violence; and when it does so, it is where it is found in a stiff deep clay.

CHAPTER VI.

STATE OF AGRICULTURE, DOMESTIC ANIMALS, FENCES, RENT, &c.

In this district 2,982 square miles are occupied by fields, gardens, plantations and houses. In the Appendix is given an estimate of the quantity and value of the produce of the occupied lands. The enormous extent of useless orchards, the produce of which is not saleable, when included in the average valuation of each bigah, reduces the apparent produce of cultivation far below the actual rate, and I have therefore given another calculation confined entirely to the value of what is actually cultivated with the plough and hoe. In these tables I have followed exactly as in Shahabad, what was stated by the farmers, although there is reason to believe, that on the whole they diminished the produce still more than that of Shahabad was lessened by the accounts of its cultivators. Such of the crops indeed, as I saw, appeared to me uncommonly good.

Various articles cultivated.—Very little land indeed in this district, produces a second crop sown without cultivation among the stubble or growing corn, unless Arahar be reckoned of this nature; but much more land than in Shahabad, and perhaps one-eighth of the whole produces annually two crops, each preceded by regular cultivation. As in Shahabad this is generally the highest land adjacent to the villages. The quantity sown on slimy banks without previous cultivation is very trifling, and the articles sown are pease, mustard, and the carminative seed called Ajoyain. This land is near the mouth of the Rapti.

Culmiferous Plants.—Although in some parts a little rice only is grown, yet on the whole it is the most considerable crop; and where it is reared, the situation is so favourable as in Bengal, that it requires no artificial irrigation. The larger share of the rice is here freed from the husk without boiling, although a good deal is assisted by this operation. Wheat is a most important crop, and in many divisions ex-

ceeds the quantity of rice. No wheat is sown in drills, although the whole is not watered. Wheat straw is reckoned a better food for cattle than that of rice; but it is usually mixed with the straw of barley, and of the pulse called Chana, which probably improve its quality. In some parts the people are persuaded, that wheat should be reaped only in the morning, otherwise the grain will not keep. Wheat and barley intermixed are in pretty common use. A good deal of the wheat is sown intermixed with seeds yielding oil, but the two crops are always reaped apart. Some part of the barley is sown intermixed with pease *(Pisum sativum)*. They are also parched without being ground, to form what is called Chabena. A species of Paspalum called Kodo, Maruya *(Eleusine corocanus)*, maize, janera and millet are much cultivated.

Leguminous Crops.—The *Cytisus Caian* called Arahar; the *Cicer arietinum* (Rehila or Chana); the Urid or Mas; Masur or the (*Ervum lens*); the *Phaseolus aconitifolius*, called here Bhringgi or Mothi; the pea (Pisum); the Phaseolus Mungo; the Dolichos; and the *Lathirus sativus*, are the principal leguminous plants cultivated.

Various farinaceous herbs neither culmiferous nor leguminous.—There is a species of Amaranthus, which produces a farinaceous grain used in diet; it is called here Anardana, and may perhaps be the plant which Willdenow calls *Amaranthus hypochondriacus*, although it differs in some respects from the description given in the Species Plantarum. It is of two varieties, one entirely of a blood-red colour, the other very pale green, called white by the natives. This I have seen cultivated by some of the hill tribes in the south of India (Mysore Journey, vol. 2, p. 247), and I am told, that it is much cultivated on the mountains towards Thibet. In this district it is always sown intermixed with Urid, and its bright colours joined to the dark green of that plant, render the crop highly ornamental. The seed is reckoned very pure, and proper food for holy men, and holy days; but it is used chiefly on the latter, when it is parched, and eaten with sour curds and the extract of sugar-cane, when these can be procured; but many use it without addition. The seed alone is of use.

Plants producing oil.—There is a species of Raphanus, and a species of Sinapis or perhaps rather Brassica; the Tisi or *Linum usitatissimum;* a species of *Eruca;* the Sesamum

called Carelu by Reede; the Rai or *Sinapi Amboynicum;* Ricinus; a species of Buphthalmum; these are all the kinds of grain cultivated in this district.

The whole grain is trodden out by oxen, and the straw managed as in Shahabad. No grain is preserved in pits. The poor preserve theirs in clay vessels, and the rich in granaries: 3,905 bigahs of land are employed in kitchen gardens, and 2,240 bigahs in the fields are cultivated with vegetables of various sorts, that are used for the pot. This in proportion to the number of people is less than the garden ground even in Shahabad. The rents on gardens are always higher than on fields; but not so high as even in the country parts of Behar. Many of the huts are covered with climbing plants, partly cucurbitaceous, partly leguminous, but the former are by far the most common, and perhaps three-fourths of the roofs are not thus employed, while scarcely any are reared on arbours adjacent to the huts, or on the fences which surround the yard.

Plants used as a warm seasoning.—The scitamineous plants form here the most important article of cultivation. A large quantity of turmeric is reared in separate fields. There are some small fields of ginger, and a sufficient quantity is reared in gardens for using fresh. The succulent vegetable raised in greatest quantity is the species of Luffa, which Rumph calls Petola. It is here called Nenuya, and is the plant which is here commonly reared on the roofs of huts.

The Europeans have tolerable kitchen gardens, but many of the fruits, which the country is capable of producing, and which grow at other stations, have hitherto been neglected, such as the orange, plum, pear, leichee, lauquat, and avocado pear. I saw no pine-apples, nor figs; and grapes are not plenty. If such be the case with the gardens of Europeans, the wretched state of those belonging to natives may be readily guessed, especially as almost all the men of property are Hindus, who in this part of refinement are exceedingly backward. They have not even water melons, and the common melon is scarcely known.

The natives have bestowed a little more attention on flower gardens, and about Gorukhpoor and Nawabgunj they have a good many, while a few are scattered through the district, but I saw none neatly kept. The natives in their gardens

rear very few medicinal plants. The Changdsar or *Lepidium sativum*, is however reared, as is also the Bayada or *Zinziber Zerumbet*. The Ol or *Arum mucronatum* of the Ecyclopédie, so common in Bengal as an esculent vegetable, is here reared only as a medicine, and is planted along with the Bayada in corners of gardens. The expressed juice of both is given to children. The most common officinal herb, however, that is reared in gardens, is the species of *Chichoreum* called Kasni, of which the seed is in considerable demand. Some of it is reared in the fields.

Plants cultivated for thread and ropes.—The *Hibiscus cannabinus* is cultivated to the greatest extent; it is always intermixed with the Cytisus Cajah, and forms the ropes most commonly used for agricultural purposes. Cotton is cultivated to some extent but adequate to supply only a small part of the demand, and reared with much less care than in Shahabad. There are two kinds, the Jethwa and Kukti. The former is by far the most common, and is probably the same with the Baresha of Shahabad; that is, it is sown along with the crops which grow in the rainy season; but for this reason I had no opportunity of examining it. In quality it does not differ from the common kinds imported from the west of India, which so far indeed as I observed on the upper parts of the Ganges, and on the Yamuna, are sown at the same season. The Kukti is the kind which produces a wool coloured-like nankeen cloth, and an account has already been given of it, when treating of Puraniya.

Plants cultivated for their saccharine juice.—Besides the Khajur palm, and the Mahuya tree, the only article of this kind is the sugar-cane which occupies about 4,800 bigahs. There are four kinds, Reongra, Mango, Sarotiya and Baruka, all of which are reared in Shahabad. All are fit for yielding extract. The cultivation is managed as in that district, but most of the extract is of the thin kind preserved in pots.

Plants used for chewing and smoking.—Tobacco and betle leaf are the chief. In the government of the Moslems the poppy was also cultivated, but the continuance of this cultivation was found inconvenient, so soon as the country came under the Company's government, and has been prohibited. I saw none, and believe that none is smuggled, although the people complain of the prohibition.

The tobacco on the whole is not adequate to supply the demand; for, although some is sent to the mountains, a greater quantity comes from Saran. The plant is however uncommonly suited for a country, of which so much is waste; because the deer and other wild animals do not touch it; and beause the heaps of dung collected, where the cattle sleep in the wilds, may be applied to manure ground for this plant, which with this management grows most luxuriantly, giving annually two cuttings.

Manures.—The people here very much neglect every kind of manure except artificial irrigation, in bestowing which, where necessary, they are tolerably diligent, the poor men of high caste, who form the greater part of the farmers, being willing to undergo this labour. They will not however hire themselves out to work for their neighbours; but many of them usually unite to carry on the labour in common, especially, when the implement is the basket (Borda or Dauri) swung by ropes, which is indeed the most common, as it is that employed, wherever the field is watered from rivers, canals, tanks, or marshes; and three or four sets of workmen one above the other are often required to bring the water to the level of the fields. On some occasions, I have been assured, that no less than 10 stages are used; but all above four are uncommon. Two baskets wrought by four men are always employed at each stage, the one basket being placed behind the other. This seems an awkward manner of working, but it saves trouble in forming the stages, very little more room being required for the two baskets, than would be necessary for one. Whether or not this saving counterbalances the awkwardness in working, I cannot pretend to say. The estimates, which I received on this subject differ very much. The stages vary from 2½ to 3 cubits, or from 3¾ to 4½ feet, in perpendicular height. Where two stages are employed, it was in some places stated, that no less than 16 men attended to work in turns, and watered daily about 46900 square feet; but this is where the men are uncommonly lazy. Ten men are the common allowance, and according to various degrees of activity were stated in different places to water daily 32400, 41600, or 52700 square feet. Where there are three stages, and where the indolence of the gentry prevails, 22 men water daily about 40,000 square feet; and in other places 18 men were stated to water, 52700 or 61200.

14 men are however the common allowance, and, according to various degrees of activity water 25300, 35000, or 41600 square feet. Four stages may be wrought by 18 men, who are stated to water 28100 square feet. Water raised in this manner may be conveyed to fields half a mile from the place, where it is raised.

Very little is here watered from wells by means of the leathern bag raised by cattle working on an inclined plain. The bucket raised by a lever (Dhengkikar) in most parts is used almost only in kitchen gardens. In Sanichara Mahuyadabar and Vazirgunj however many fields are watered by this machine, which is there more common than the basket; although 10 men, it is admitted, can only water with the lever one-third part of what they could do with the basket; but then they raise the water double the height. What the quantity raised however by the same number of men would be were the heights equal, I cannot say, and the basket cannot be used in wells, and some parts have no other supply of water. The trough in form of a canoe, here called Don, is used occasionally, where the water, especially in marshes, is near the surface; but even there the basket is more commonly preferred. I have however had no very satisfactory means of ascertaining which method is the most economical, because the don is seldom used, where there are two stages, and I procured no estimates of the quantity of land which a given number of men can water with the basket, where one stage alone is used. It was stated to me in Bangsi, that two dons wrought by six men could water daily one half more land than 12 men working two sets of baskets can do, the elevation in both cases being the same, that is about 8½ feet perpendicular. This shows such an immense superiority in favour of the don, as to excite doubts concerning the accuracy of the statement, for not above 60 dons are employed in the whole of that extensive division. It is true, that a don costs about eight times as much as a pair of baskets, but such a trifle could be no object when put in competition with the saving of so much labour.

The natives have formed no reservoirs, such as are used in Behar and Shahabad, the rains being more copious and regular; nor have they been so diligent in forming canals; although these have not been altogether neglected. I do not think,

owing to the climate, that any inconvenience is felt from the want of the reservoirs; but greater pains bestowed on the canals would be of the utmost importance; and, next to an increase of labourers and stock, would be the greatest improvement of which the country will admit. The tanks are small and not numerous.

In the north and eastern parts of the district, the want of manure renders it necessary to have recourse to fallowing, and in many places one-half of the farm is in grass, and the other in cultivation. In other parts a smaller proportion of fallow is sufficient. The pasture on fallow is of admirable use in the rainy season; but, during the dry weather affords very little resource for the cattle; and on the whole I believe, that the practice of fallows, if more generally diffused, would be highly advantageous, wherever the land cannot be flooded. It is true, that under this manner of cultivation the general produce of the country would be lessened, and of course the number of inhabitants would be smaller; but, what appears to me of much more importance, the people thus maintained would be less necessitous; for I think, there can be no doubt that the lands restored to vigour by a fallow, would be more productive with the same labour, than those which are exhausted by perpetual crops. The following statements will show the nature of this operation: First, 100 bigahs of land annually under crop at 5 *mans* of grain a year will produce 500 *mans*, able to feed 50 people, and the cultivation will require six ploughmen with their families, amounting to 24 persons, leaving two-fifths of the population for other purposes. Second, 100 bigahs, half in cultivation at 6 *mans* of grain will produce 300 *mans*, capable of feeding 30 people, and will require three ploughmen with their families, amounting to 12 people, leaving one-half of the population for other purposes. But, besides the comforts, which a larger proportion of disposable persons would procure, there is here left one-half of the land for feeding cattle, the whole produce of which is applicable to the comforts of the population in the second case, while in the first case, the population is totally destitute of such resource.

DOMESTIC ANIMALS.—A good many of the horses are employed in carrying fire-wood and salt; and a few in the carriage of grain and cut grass. All the large horses are im-

ported, except those bred by the judge, who has a large establishment of brood mares, from which, I presume, he derives no great advantage, nor have his horses nor those of other gentlemen been included in the tables. The ponies seem no better than in Behar, although the water of the Teri near Nawabgunj is said to be peculiarly favourable for this animal, and although it is alleged, that ponies of a better breed than common are reared on its banks. Asses are employed by washermen to carry clothes to and from the water, and to bring home the soda or potashes used in washing. They are as wretched as in any of the districts hitherto surveyed. The cattle of the cow kind are fully as good as those of Behar. For numbers see Appendix.

Goats in general are of the long legged kind, but inferior both in size and beauty to those from the banks of the Yamuna, or from the south of India. They breed once in nine months. The sheep are of the same kind that is usual in Behar. The owners allege, that they breed once only in two years. Swine are exceedingly numerous and wretched. Those entered in the Appendix are breeding females.

Fences.—A few gardens are fenced with quickset hedges. The number of ditches is in general very small, and in most parts of the district this kind of fence is chiefly employed to secure new plantations of mango trees, the grand object of the natives' care, although totally useless, or sugar cane, the most valuable crop that is reared. Near the Ghaghra ditches round villages are pretty common, and the mound is usually planted with a row of reeds, which conceal the space within from view. The roads leading immediately into the villages are usually fenced with dry thorns, to keep off the cattle going out to pasture, and returning home.

Farms.—No people, except some artificers and traders, pay a ground rent for their houses; and many of the artificers even are exempted, partly from their belonging to the manorial establishment, and partly from their renting lands for cultivation. Nor, except the Mahuya trees on one estate, do plantations pay anything. The rents arise almost entirely therefore from the arable lands, and until the English government the occupancy of these, even as tenants at will, was entirely confined to the Ashraf or gentry. This restraint was removed as soon as Mr. Rutledge took possession, and many

people of low rank flocked into the country from that of the Nawab Vazir partly on this account, and partly because the rents were very much lowered. This emigration continued active, until the zemindars of the Nawab adopted the policy of the English, since which it has nearly, if not entirely, ceased. The competition for tenants among the landlords induced them also to grant leases to many of the lower orders, a circumstance which has borne hard on the gentry, and occasions many complaints on their part, for they now cannot procure a sufficient number of people to cultivate their farms; and for those which are still procurable they must pay very high wages.

The Ashraf still, however, farm the greatest proportion of the lands, and are always one way or other favoured by paying a lower rate of rent. They also enjoy the advantage of large herds of cattle, nor do any of the lower tribes presume to find fault with the trespasses which these herds commit; for they still look up with awe to the persons of rank, who until of late held great discretionary power over the lower classes. Very few of the Ashraf either plough, sow, or reap, but the greater part by far weed and water; and as the difficulty of procuring workmen must still increase, there is little doubt, that the number of the gentry must either be very much reduced, or that they must betake themselves to the plough, as both Brahmans and Rajputs have done in the west.

The second class of farmers, consisting of traders, is exactly on the same footing as in Behar. The observations made in the account of that district on the third class of tenants, or artificers, are also applicable to this district. The farmers of the fourth class, whose proper duty it is to plough, are here called Grihasthas or inhabitants, the very mention of ploughing being considered discreditable and shocking. The number of slaves among them is quite inconsiderable; and such, as are to be found, have almost entirely been introduced into great families as dowries with their wives, when they honoured the people of the east by marrying their daughters. Since the English government this class of farmers has greatly improved its condition, indeed it could not before have been said to exist, almost the whole having been servants. Now many have farms, and

few will condescend to work for mere wages, most of the people, who are hired in that manner, coming from other districts, while the labourers of this district are usually paid for ploughing, sowing, and reaping, by a share of the crop. Very few indeed have, however, obtained a stock sufficient to trade, and almost all the farmers, who trade in grain, belong to the gentry. There are here, properly speaking, no under-tenants. Many indeed make their bargain with the Mahato, or chief man of the village, who contracts for the whole; but he is to be considered entirely on a footing with the farmers of rents (Izarahdar, Mostazir) of other districts.

In this district at present the greater part of the rent is paid in money, although in some places much is still paid by a division of the crop. During the Nawab's government the latter manner of payment was by far the most common, owing to the encouragement given to the gentry, who are always desirous of this kind of settlement, which favours their indolence. Since the change they evidently become more diligent in watering their fields, although the very low rate, at which the best lands are now let, has abated considerably the general industry of the country. Formerly it was only a few fields near the villages, that were let for a money rent; but this was very high. Now the larger share in many parts is let in this manner; but the rents of the whole, owing to the great extent of waste land and the small number of people, have been reduced to a mere trifle. This cause, during the government of the Nawab, was not allowed to operate, the people on each property being held in a great measure as *ascripti glebæ*. Perhaps no law existed to this effect, but it was not usual for one landlord to take away his neighbour's tenants; and whoever did so, would have been liable to reproaches, which would generally have occasioned the displeasure of the Governor. Where the rent is paid by a share of the crop in this district, the share, which the master receives is generally smaller than that taken in Behar, and is often only $\frac{1}{4}$ after deducting ploughing, sowing, reaping, and some smaller charges allowed for the manorial establishment. The system of advances has not been pushed to so considerable an extent as usual.

The arrears due by the tenantry, except where the estate is under the management of the officers of revenue, are very

trifling. No attempt has been made to regulate the size of farms, and few or none except poor tradesmen, who have been lately permitted to rent lands, have less stock, than suffices for one ploughgate. The number of large tenants, who have 10 ploughs or upwards, is very inconsiderable.

The tenants very seldom procure advances from the landlord. The gentry are somewhat favoured in the rate of rent, as I have above mentioned; but in general no such inequalities prevail as in Puraniya, and on the whole, except in the favour shown to the gentry, the assessment is made as equable as the landlords can; but the state of the country does not admit of their following their inclination. There is so much waste land, and so many landlords wish to introduce new settlers, that these will consent to give little or no rent, and, on the smallest increase being demanded, however able the farm might be to pay it, they remove to another place, and generally change every two or three years. This is very far from being advantageous to even the tenants who thus change. Knowing, that they are likely to remove, they never think of rendering their situation comfortable, the hovels, therefore, which they inhabit, are to the last degree wretched, and they indulge in indolence and incurring debt, being prepared for elopement, whenever their credit terminates. The old tenants who have more comfortable abodes, to which they are attached as their birth places, are somewhat more at the mercy of their landlords, and pay a higher rent, although the fear of their throwing up their lands, and becoming vagrants, has enabled them to reduce the rent much below what it was in the Nawab's government. A greater stimulus however to industry, a character to support, and habits of fixed residence, render this class much more comfortable than the new tenants; although, all being gentry, they are naturally little suited for the pursuits of agriculture, at least as farmers.

It might be expected from many of the above mentioned circumstances, that I should have heard few or no complaints of illegal exactions being made by the landlords; but although the complaints were by no means so numerous as in Bengal, this was by no means the case, owing to the footing on which the landlords here have been placed. As they have only been secured in their estates for short periods of three or four years, they are exactly on the same footing

with those who in the districts hitherto surveyed farm the rents. Their object is to make as much as they can during the period of their agreement, and the state of their lands at the end of that time is of no consequence, as their new agreement must be made relative entirely to that state, without retrospect to former assessments. That under such circumstances the country is not in a worse state, is highly creditable to the landlords, especially to many of the higher families, who seem to me to retain a kindness for their tenants truly praise worthy. The old tenants mutually view their landlord with respectful attachment; and, so far as there was any hope of success, would willingly shed their blood in his cause; but as the superiority of military discipline has rendered their assistance of less importance, this tie is gradually losing its influence. Still, however, it has a great weight, and new men, who have purchased estates, have often found it impracticable to take possession, or at least to realise the rents; and disputed boundaries, owing to the tediousness of the law to which the natives are not yet reconciled, are still often the occasion of broils ending in bloodshed.

The duration of leases has generally been equal to that of the settlement made by the collector with the Zemindar, that is for never more than four years, a term too short for any good tenant, were there the least danger of his being turned away. In some parts the tenants will not now take leases for more than one year; because, the rate having been gradually lowering, they expect every year to obtain a deduction. The tenants on the whole are certainly more independent than in any part of the country that I have yet surveyed, owing partly to their tenure being in general of a good nature; but still more to the abundance of waste land, and facility of leaving any master that uses them ill. The lowness of rent, however, has been a check to improvement, and it is in general admitted, that, since the rents have been lowered, the fields have become less productive, owing no doubt to less care being bestowed on their cultivation. But even the facility of finding a new settlement, when discontented, has not altogether saved the tenantry from arbitrary exactions, or from what is more ruinous, the vexations of the

law held over their heads by litigious men, who farmed the rents, and were no way interested in their condition.

I am thoroughly persuaded, that one of the most practicable means of securing the tenants and other inhabitants from oppression is to re-establish in each Mauza the office of hereditary chief. This person should be considered, as he was under every well-regulated native government, as the agent and protector of the other inhabitants, who from ignorance or timidity are seldom able to protect themselves. Although, therefore, the office should be hereditary, in order to render it respectable, yet in all cases the representations of the people should be carefully consulted, and whatever person the majority of them chooses from the hereditary family should enjoy the office. Should even the people have no confidence in any individual of the family, on a representation of the majority, some stranger should be appointed to hold the office, until a person of the family arose, who enjoyed the good opinion of his neighbours. All payments to landlords, whether of free or assessed lands, should be made through these (hereditary) chiefs, who on a reasonable commission are usually willing to account for the whole rent, and with such management all the tenants of a Mauza are usually willing to be mutual security for each other. By this means the most oppressive system of collecting rents by low ignorant messengers (Mohazil Peyadah) might be altogether avoided, nor could any doubts arise, whether or not the rents had been actually paid. In this district, at every renewal of the settlement, there can be no doubt of the indisputable right of government to restore the village establishment to this footing. Even in Bengal, where a perpetual settlement exists, I have no doubt of the right of government to interfere; for such an officer, I think was actually established in every Mauza, when the settlement was made, and most ample allowance was deducted for his charge. If, therefore, from the negligence of the officers employed, the landlords have been permitted to render these chiefs of Mauzas their mere creatures, and the tools of their illegal exactions instead of the protectors of the poor and ignorant, I cannot think that such an abuse ought to be allowed to continue in perpetuity.

The landlord of course should have a right to complain, and to have any man removed, who failed in his collections; but he neither should have the power of removal at discretion, nor even the recommendation of the successor. His security for the management of the estate must depend on the clerk (Patuyari) of the Mauza, and on the application of the law for the recovery of arrears, and on this point the law is abundantly speedy. Even the clerk, whose office is generally, and always should be hereditary in a similar manner with that of the chief of the Mauza, should not be entirely at the will of the landlord, although he no doubt should have the power of selection; but he should not be at liberty to dismiss any occupant without assigning reasons sufficient to satisfy the collector, that he has just cause of complaint. For, if the clerk is at the mercy of the landlord, the collector has no means of judging concerning the value of the lands; and even where the settlement is perpetual, his having such a knowledge is absolutely necessary to secure the revenue on a division of the estate.

In native governments the hereditary chiefs and clerks of Mauzas are entrusted with considerable powers in supporting the police and administration of justice, and with the utmost benefit to the country. Although, however, the want of such an authority in the Company's government is severely felt, I doubt much of the expediency, under existing circumstances, of requiring their assistance in either way, especially in the support of the police. The vexation to which every one of them would be exposed, by hanging on about the court on complaints laid against them by the sharks of the law, would deter from accepting the office any man who was not resolved to pay his way, and of course to repay himself by oppressive means. Perhaps, however, they might be permitted with the assistance of a jury (Panchuyit) to decide petty differences arising among the people of their own Mauza, provided it should be clearly understood, that the officers of government should in no manner interfere, except to enforce the decisions of the jury.

Although the important offices of hereditary chief and clerk have been in general abandoned to the discretion of the persons considered as owners of the land, and, although these persons have totally destroyed the rights of these useful

officers, and rendered them their mere tools, some other parts of the mauza establishment remains unaltered. The carpenter and blacksmith everywhere, and in most parts the priests of the local deities and spirits, a weigher, a barber, and tanner, receive certain allowances for their support. The reason of their not having been disturbed, seems to have been, that they could not be converted into tools of fraud or oppression. By the caprice of owners, accidents, and other circumstances, the extent of mauzas has been rendered totally uncertain. Some are entirely waste, others contain an enormous multitude, and many are scattered about intermixed with others; but, if an attempt is to be made of restoring to the inhabitants these beneficial communities, such divisions should be totally disregarded, and a new arrangement, after a careful examination on the spot, should be formed, making each mauza to contain from two to three thousand inhabitants, and rounding as much as possible their boundaries. It might be afterwards left to the magistrates, when by floods or other accidents the greater part of a mauza was destroyed, to annex the remainder to some adjacent community; or, when by lands deposited or improved a great augmentation of inhabitants had taken place, to subdivide the community; but in no case should divisions or alienations of property be allowed to operate in the arrangement.

In carrying into execution the new arrangement of mauzas, another grand source of oppression to the farmer, the uncertainty of claims on his purse, might in my opinion be much remedied. The officer employed should carefully examine the lands. Such as would appear to be waste, or held at will, or by a lease for a term of years, should be carefully separated from those which either by custom or lease are held in perpetuity, at certain rates. The former should be fully confirmed to the landlord, to dispose of in whatever manner he thought fit, subject, however, to all leases granted on them becoming void by a sale of land for arrears of revenue. This kind of tenure, I have no doubt, being by far the most advantageous both to the community at large, and to the farmers themselves, should be extended wherever there does not exist clear proof of the tenant having a right in perpetuity at certain rates. The prejudice in favour of the latter tenure among the tenantry would render it highly unjust to deprive them of it,

wherever they have a fair proof of its existence, and it should be therefore fully confirmed to them by a decision of the officer employed, and the terms should be fully described, not only in a special lease granted to each man, but in an account to be recorded both in the book of the village clerk, and in the collector's office, so that when lost in one, it might be restored from the other. Although the smallest force should not be used, I would however recommend, that the officer employed in the settlement, should endeavour to persuade master and tenant in all such cases, to determine what the one would be willing to receive as his due, and what the other would be willing to give, so as to avoid indeterminate claims. Where both parties could be brought to agree, which I am persuaded would in most cases be easily accomplished, the amount should be valued in grain, at the market price, and the tenant should take a lease in perpetuity, agreeing to pay annually a certain quantity of grain, commutable at the average price of the ten preceding years, ascertained as the Fiars are in Scotland. The whole lands of this nature, as well as those exempted from assessment, should be carefully measured, and the measure recorded at the expense of the tenant, who could perfectly afford this charge, in consideration of the security which his property would thereafter enjoy. The very ill-defined nature of property in this district, and the difficulty of procuring any decision on the subject, may be estimated from the state of the lands in the town of Gorukhpoor, which will be mentioned when I come to treat of particular estates.

Such a survey and settlement would, it is evident, require much time and expense; and the operation would require to be conducted by upright, active, and intelligent persons. An union of such qualities cannot be expected in every collector, nor do I think that the person employed should be distracted with any other care. I confess also, that governors are unavoidably very subject to be deceived in men's characters, and in selecting a number sufficient to carry on the work quickly, many ill-qualified persons would no doubt be employed, and do much harm; but every governor, after some residence, might ascertain a few men properly endowed, for there are many such, nor is it at all necessary that the plan should be carried into execution everywhere at once. With respect to the serious article of expense, I have no doubt that

in such an investigation, much land now held without legal title, would be discovered, and brought to account; and that its revenue would do far more than defray the expense. The persons employed ought of course to be gentlemen in the civil service, vested with high powers, and responsible only to the principal officers of government; but their responsibility should be great, and the magistrates and collectors should be held bound to forward all complaints, and to prosecute for such complaints as appeared to them well founded.

The labourer is here better paid than in any of the districts hitherto surveyed. This is no doubt owing to the competition among the gentry, who have great difficulty in hiring workmen, they themselves being unable to plough. There is not here such an extraordinary allowance for harvest, nor can the women earn so much by gleaning, but the women of the low tribes have ample employment in weeding, transplanting, and reaping pulse and oilseeds, and make a good deal, fully at least as much as in Behar.

People who live entirely as day labourers, are very few in number; but some poor artists, and the second class of ploughmen, occasionally hire themselves in this manner, and are in such request, that their wages are as much higher in proportion as those of the regular servants are. None of them, so far as I heard, are paid in advance. Taking hire for harvest is not considered discreditable, except among the gentry. The most common day labourer that can be procured to weed and transplant, are women, and boys too young for holding the plough, and these at Parraona earn daily 3 sers (of 96 p.w.) of grain. The custom of two or three farmers uniting to work on each other's fields in company, and in turns, is not common, except in watering, but is occasionally practised even in ploughing. There are few slaves employed.

Estates in general.—In this district the extent of land exempted from paying revenue is generally admitted to be enormous, probably much more than even in Behar. I am not in possession of what is stated in the public records; but it is generally believed that these are very imperfect, and that they contain only a very small proportion of what is actually held. Of this a remarkable example was brought to light in the course of a litigation, during the time I was in the district. A religious mendicant had procured a grant of less than 300

bigahs, and on examination it was estimated that under this pretence he held what was supposed would measure nine or ten thousand. It must be observed, that it is very often not only the inclination, but the interest of the Zemindars, or acknowledged proprietors of the land, to encourage such defalcations. Many of the lands are held by those who have spiritual authority over the Zemindars, and to favour their claims is a religious duty, to which the natives are generally very much inclined, the more especially as it is attended with little or no loss. The person allowed to usurp part of the Zemindary lands secures the owner during the currency of his agreement with the public; and, when that expires, whatever has been thus alienated, cannot be brought to proof without an examination of the extent actually held, which has been never attempted. Even when the revenue of the estate at a new settlement is farmed to a new man, he naturally takes the estate as it remains, and, confirming the usurpation, frames his offer in proportion to what remains; for he not only would incur the odium of seizing on lands enjoyed by men respected from their religion or rank; but his conscience in general would be alarmed. There is even reason to think, that in some cases the usurpations have been encouraged by the owners with a view of procuring part back by a nominal sale, so soon as the property had been consolidated by possession in trust. But farther, other parts of these lands have been granted to the Zemindars, or their kinsmen, for a support, and it is natural for them to take as much as possible, the whole of what can be thus secured being clear gain.

Besides these usurpations, which are no doubt illegal, and might be resumed, whenever government thinks the measure expedient, there is great reason to suspect, that many of the deeds by which the lands are held, are mere forgeries, made out by clerks in the office of revenue at Lakhnau after the cession of the district to the English, when it was found that attention was paid to such tenures. Why the records of the district were not demanded, when the territory was ceded, I cannot conceive; for, although by the system adopted in Bengal, the records have become of less importance, it could scarcely have escaped the knowledge of any intelligent revenue officer, that in a Muhammedan government the possession of the records is indispensably necessary in realizing the reve-

nue. By this omission, everything was left to the discretion of the Pergunah registers (Kanungoes), men not only rather corrupt, but strongly influenced by religious scruples to favor pretenders enjoying a character of sanctity, as was the case with the greater part of the claimants. The opinion that such fraudulent deeds were frequently used, is very prevalent.

The Rajas seem originally to have managed their whole estates by letting each Mauza or Deha to a Britiha or Sikmi, who brought inhabitants, received a handsome commission, and accounted to the Raja for the balance. His office was hereditary in the manner usual in India, that is to say, the ablest man belonging to it was chosen as the agent and representative of the people; but he was held bound to support his kinsmen, more however by a sense of propriety, than by any other bond. The people however, would have become clamorous, had he neglected this duty, and unless in peculiar circumstances their opinion would have produced his dismissal. In case of the Raja being dissatisfied with the conduct of a Britiha, he appointed a Mahato to perform the duties, and usually let the Mauza to this person for a short term of years at a fixed rent. In this district the term Jethraiyat is never given to the hereditary chiefs of villages, but is given to every tenant of consequence. Since the dissolution however of the regular Mauza establishment these often assist their poor and ignorant neighbours in adjusting their accounts. The cultivators who rented lands, and cultivated them with their own stock and servants, do not seem ever to have had a hereditary right to the land, and were removable at the will of the Raja, except when they had leases, which were always very short; but they were all gentry, ready when well used, to draw their sword in their master's defence, and were therefore perfectly secure from oppression from their master at least, his authority depending entirely on their attachment. The power of the Rajas was gradually undermined by several circumstances. First, they assigned large parts of their estates in appanage to younger branches of their families, and as rewards to trusty servants; and, although these and their descendants in general continued attached to their chief, this did not always happen, and generally their services required management; so that, although seldom refused, it was often given with delay, and want of zeal. Secondly, large portions

were assigned for the support of religious and learned men, totally incapable of defending the Rajas authority. Finally, the Rajas incurred debts, and had no means of paying them, but by alienating their lands; either altogether, or in mortgage, always however retaining to themselves the settlement of the revenue with the government, and the power of levying this from all the proprietors in the lordship (Raj), generally in fair enough proportions; but in India no payment is made without a part sticking to every hand through which it passes. As the power of the Rajas sunk, that of the governors (Amels) rose, and the vassals and under tenants were stirred up as much as possible to disobedience, so that the Amels had occasionally power to make settlements directly with these lower persons, and at any rate to compel the Rajas to more regular payments. It is alleged, that at one time they realized a revenue of 8,000,000 rupees; but I have heard no authority except a vague report for so enormous a revenue, which would imply a very general and careful cultivation, of which I see no traces. It is indeed said, that during the government of Suja ud Doulah, the district was in a much better state than at present, and that the rents having been farmed to a Colonel Hannay, that gentleman took such violent measures in the collection, as to depopulate the country, and I certainly perceive many traces of cultivation, where now there are wastes and woods.

I have above said, that I see no traces of a cultivation adequate to produce a revenue of 8,000,000 rupees, although many parts are no doubt waste, and covered with forests, which retain evident traces of former cultivation. Yet I suspect, that the country on the whole for many centuries, has never been so well occupied as at present, and never paid so large a revenue. The forests, which formerly were plantations seem to me owing to the frequent changes of different Rajas habitations, for every man round his house planted thickets of mangos and bamboos, that in a great measure secured him from Muhammedan troops; and, when forced by surprise, or more commonly by treachery, from one den, he or his heir retired to another. In the continual feuds also large tracts were often sacked, and the inhabitants driven to other quarters, from whence they did not return, until perhaps their new abode underwent a similar fate. Such an

accident has now befallen the frontier towards Butaul, where in the whole division of Dhuliyabhandar only two families and the police officers remain. The customs and privileges of the high castes, who would neither plough, nor suffer any man who would perform that labour, to rent land is indeed incompatible with a high degree of cultivation, and alone, without any other cause, would have reduced the country to a low ebb; but that existed in full force from before the time of Akbur, until the English took possession. If ever the country was in a better state it was before the rules of purity were established, and there are manifest traces to show, that during the government of the Tharus the people must have enjoyed a very flourishing state. The great number of large brick buildings, which the country then contained, shew it to have been in a state very much superior to anything now known in India.

During the latter part of the Muhammedan government, the governors (Amel) usually farmed the revenues from the Vazir, and on their arrival made a settlement for the time, which they were to remain in power. In this there was seldom much difficulty, because neither party had the smallest intention of performing any part of the agreement. The object of the governor was under pretence of the settlement to inveigle the Rajas and other landholders into his power, and then to squeeze them; while the object of such of the Rajas as attended was to procure the assistance of the governor against some neighbour, who was their enemy. Although many of the Rajas and other notables would not attend, they never failed to send agents with every profession of obedience, and to make the settlement. It generally however, in the course of a few years happened so, that the whole was either duped into a reliance on the promises of the governor, or by the assistance of some enemy compelled to a compromise; so that one way or other it ended in their being squeezed; but there was always some moderation shown in the demands, nor was any attempt made to deprive the chief of his dignity and power, except occasionally, when some violent chief was compelled to restore a property, which he had seized from an ally of the governor. The actual amount of the revenue was therefore quite unconnected with the settlement; and it is alleged, that some governors were unable to collect as much

as they paid to the Nawab. This however, I presume, was a very unusual case; and it seems to have been more common for them to accumulate a great deal, of which on their return to Lakhnau they were usually again squeezed.

When the country was ceded to the English, Major Rutledge, appointed to the management, acted with great vigour and prudence. He instantly, while the known power of our discipline gave him authority, dismantled every stronghold, and thus established the uncontrolable authority of the law, which gave a protection to the lower orders before unknown, and brought new settlers from all quarters. His claims at first were very moderate, and the principal error committed was in making the settlement for too short a period. I do not however know, that this was his fault; but a settlement for less than ten years is quite inconsistent with improvement.

On the whole I must say, that the proprietors in this district appear to me to have been hardly treated. Wherever the country is fully occupied, such as is the case on the right of the Ghaghra, I would recommend a perpetual settlement on the footing of Bengal, Behar, and Benares; but made with less precipitancy, and after a careful examination of assets, with proper precautions for securing an equality of assessment, and with a careful investigation of the rights to free lands. I would besides most earnestly recommend, that the settlement should be made, not in money, but in grain, under the regulations which I have already proposed to be used in letting lands to the cultivator.

With respect to the part of the district, which I have this year surveyed, a very different management would be required. Any tax, which the district could afford to pay in the present extent of cultivation, would be no stimulus to exertion, and a great part of the country would continue waste, as has happened in Bhagulpoor. Even the present system is better, although I suspect much, that on the whole the cultivation has become stationary, if not retrograde. I would therefore propose, that the whole should be made what is here called Khas, or as is said in the south of India, that the Raiyatwar system should be adopted, or in other words, that the officers of government should let the whole to the cultivators, receive the rents, and divide the amount,

after deducting the revenue, among the different claimants. This of course is totally different from what Lord Teignmouth calls Khas management, which was merely farming out the rents of the estates in small portions, as is done now in fact in larger. The system I propose, requires the re-establishment of the full community of each Mauza; besides the usual tradesmen, and religious establishment fixed for each Mauza by ancient custom, it requires the hereditary chief chosen by the farmers, the accountant appointed by the collector, and the watchman by the police. In this district there is fortunately no occasion for having recourse to the method of letting by rates and measurements, the grand source of oppression and fraud. The cultivators claim no right, except that of making the best bargain that they can, and of enjoying their land for a term of years without any other demand but what has been agreed. It may be supposed, that there would be no adequate check to prevent the frauds of the hereditary chief of the Mauza, or Brittiya as he is here called; but I do not think so. Frequent and unexpected visits to different villages by the collector, with the power of examining the records and tenants, and a similar right to all concerned in a share of the profits, seem to me a check likely to prevent great abuses, as the chief of each Mauza and accountant would have at stake a valuable hereditary office, liable to be forfeited in case of fraud being discovered. Their frauds also would be of a nature very difficult of concealment from every neighbour; nor can it be supposed, that any man should be without an enemy in his vicinity, ready to procure revenge by acting as an informer.

Intermediate officers between the chiefs of villages and the collector will no doubt be necessary, and the proper regulation of these is one of the most difficult matters in Indian finance. In the circumstances of this district, in my opinion, they should be appointed by the different landholders belonging to the division under their charge, and wherever it was possible from their own number; and great advantage would result if the office was rendered hereditary, subject to the same restrictions as the chiefs of Mauzas. The person holding it ought to be considered as the proper guardian of the landlord's rights, to see that their lands are let to the best possible advantage, and that each man received his

share after deducting the revenue, which he will forward to the collector.

In order to be a check on these agents, general registrars (Kanungoes) must be employed; but I doubt very much of the propriety of having one for each Pergunah or estate, as is at present the case. After much conversation with them I am persuaded, that few or none of them know any thing of the real state of the land, or of the amount of cultivation and produce, the proper foundation of all revenue operations. So far as I know, they are mere penmen, who sit constantly in their own house, and know as little of agriculture, as if they had passed their days in St. Paul's Churchyard. They are indeed perfectly acquainted with the chicane used in making up accounts; and, when they choose, can throw much light on that subject, and sometimes have been cajoled, and oftener terrified into disclosures of great use to the gentlemen employed as collectors. Much oftener, however, they have been leagued against not only the collectors, but against such owners as do not secure their favour by corruption. At present they have constant opportunities of conversing and arranging their reports with the accountants of villages, and of thus rendering these suitable to their purposes. I would propose, therefore, that the whole Kanungoes should be confined to the office of the collector, who after signing the reports forwarded to him by the clerks of Mauzas, should deliver them to the registrars to be arranged, and condensed into whatever forms may be found expedient, and these should be transmitted by the collector to the persons, for whose purpose they may be intended. A very little attention on the part of the collector would render all attempts at fraud too dangerous to be attempted.

I have considered it as necessary, that every estate free or assessed should be put under the same management, because the conduct of the owners of free estates has proved very distressing to the owners of the assessed, and because their tenants have a right to protection. So soon as all restraint was removed by the English, the owners of free estates seduced away the tenants on the assessed by giving them land at a low rate, and thus compelled the owners of the assessed estates to lower their rents; and similar attempts to inveigle away the tenants of each other among the owners of assessed

estates contributed to the same end, that is to a great reduction of the rent. This again induced many people to come from the Vazir's country; until his Zemindars followed the same example. This has so far produced a good effect, as it has rendered oppression less common. It has, however, not only diminished industry among the tenants, and introduced a set of wretched vagrants; but has been very distressing to the owners of the land. When many new tenants have settled on an estate, a considerable rise of assessment has usually been expected; but there is every reason to believe, that in many cases the actual rent of the estate has been diminished, even where the extent of cultivation has increased a half.

The plan, which I have thus proposed, I consider as a mere experiment; for it must be confessed, that many difficulties attend the Raiyatwar system, and in particular it would seem to require the collectors being always persons of more abilities, industry and honour, than it is reasonable to expect should generally pervade any class of men. I do not therefore propose, even should the plan be found to answer, that it should be permanently continued; but that, as soon as the district should be brought into tolerable order, a settlement in perpetuity should be made. I am indeed persuaded that no state of any extent, without suffering the most enormous frauds, can levy the whole rents of the land, it being absolutely impossible to prevent many parts from falling under the management of unfit persons. It may, however, be easy enough to find a few persons capable of managing a portion to very great advantage. I propose the northern part of the district of Gorukhpoor for the experiment, because in its present state the revenue is so trifling, that if the experiment fails, the loss would be of small importance; while the extent is so great, that should the experiment succeed, the advantage will be very high. But farther, should it succeed, many parts of the plan thus ascertained practicable, might be applied to every part of India, such for instance as the re-establishment of the small communities for the protection of the poor, which have been recommended. In case of success, we might also have a means of making a perpetual settlement on a plan, which would obviate the grand and formidable objection to that salutary measure, wherever it has not taken place.

The objection is, that when the settlement is fixed in perpetuity, no rise of revenue can be made in case of the depreciation of money. By fixing the assessment in grain this may no doubt be in some measure obviated; but some considerable difficulties attend that plan, and a percentage laid on the actual revenue, considering the inequality of the present rate, would be highly unjust. If the plan of management, which I have proposed for Gorukhpoor, should succeed, as I expect it would, there would be an ample revenue and an ample provision for the owners of the land, which should be perfectly equalized by being made a commission on the net proceeds, as high as the exigencies of the state will permit.

The management of estates differs a good deal in different cases. Where there is no hereditary chief (Brittiya) of a Mauza, the owner sometimes places it under the management of a temporary officer, named Mahato, Katkinadar, Thikadar, or Mokuddum; and even does so when the hereditary chief cannot be trusted. In most cases both Brittiyas and Mahatos may be considered as mere farmers of the rents, and contract at every new settlement to pay a certain sum to be owner, and let the lands as they please. In such cases the Brittiya, whose village is given to a Mahato, receives from $\frac{1}{4}$ to $\frac{1}{10}$ of the gross rental, a very heavy charge. In other cases again the lands are managed by both Brittiya and Mahato in what is called the Khas or Kangcha manner, that is, these persons let the lands, and account to the proprietor for the proceeds, deducting their commission, so that if a Mahato is employed, where a Brittiya retains his right, a double commission must be paid, and the commission of the Mahato is generally as high as that of the Brittiya. In some vicinities the only persons considered as Mahatos are those who farm the rents; when these are collected on commission by a person appointed by the owner, he is there called Jeth Raiyat: but in most places the term Mahato is given to both descriptions of persons, and Jeth Raiyat is a title given to every wealthy or intelligent farmer, as I have formerly mentioned. In many places however, especially where the estates are small, there is neither Brittiya nor Mahato, although I have no doubt that originally each mauza had its Brittiya; but many have been allowed to be unjustly deprived of their rights, and others have removed the burthen of vassalage by having become the

immediate vassals of the government, having settled directly with the Collectors for their respective villages, thus depriving their former lord of his undoubted right. Indeed it may be in general observed, that whatever persons have not been entered in the Collector's books as proprietors, or have not been appropriated to the service of the magistrate, have been left entirely to the discretion of the person acknowledged as the proprietor, who has been allowed to dispose in whatever manner he pleased of all the offices on his estate, although there can be no doubt of these offices having been hereditary.

Wherever the old establishments of the mauzas have been dissolved, the money is collected from the tenants, and bargains made by a clerk or accomptant (Patuyari), one of whom often serves for many villages. In some places each owner appoints whomsoever he pleases as his clerk (Patuyari); in others the clerk is held as an agent of the register (Kanungoe), and cannot be removed without an order from the Collector; and finally in some places there are two sets of clerks; some who actually manage the affairs of the owners, and settle with their tenants, and others who make up the kind of statements furnished to government, which, as far as I can learn, have in general no sort of connection with the real state of the country, but are fabricated to answer the views of the register (Kanungoe). Whatever clerk actually manages the estate, he is always paid by the tenant, usually receiving a commission of $\frac{1}{2}$ ana on the rupee, but the rate varies in different places, and is often fixed on the plough. Where the estate is too large for the management of the owner and the clerk, a Gomashtah assists the master in settling the clerk's accounts, and in letting the lands; but it is only on a very few estates that there is a Dewan, or that multitude of sharks usual in Bengal.

In some places there are officers called Chaudhuris, who seem to have been intended to prevent disputes about boundaries, with which they were supposed to be acquainted. How far they may be able to determine disputes between poor neighbours I do not exactly know; but it is notorious, that the owners of large estates, who have disputes, that is every one in the district, pay no attention to these officers. As their office is hereditary, it cannot however be done away

without a full remuneration, or an act of injustice, such as has been too often permitted to take place with respect to those who held such offices, and many of the Chaudhuris, it is alleged, have been stript of their lands and other perquisites.

There should be a watchman in every inhabited mauza, and he is allowed two bigahs usually of a very large size and free of rent; but he is considered as entirely at the disposal of the magistrate, which seems to be an innovation; for, although in all native governments the watchman is bound to inform the magistrate of irregularities, he is also held bound to act as a messenger for the owner. In many cases, it must be observed, one messenger now serves for several mauzas, receiving two bigahs for each, which seems to leave much room for peculation in the native sherif or Nazir of the magistrate's court. The considerable landlords are now under the necessity of hiring messengers (Peyadahs), the commencement of a great evil; for, although they as yet only call the tenantry when wanted, and do not collect the rent as usual in Bengal; yet they are paid for every message by the person to whom they are sent. The excuse for this is, that no one here is willing to pay anything without force. Besides these officers of use to the owner, each mauza retains its old establishment of tradesmen and priests, on both of which much less innovation has been attempted than on the more important offices of hereditary chief, accountant, and watchman.

The term zemindar is seldom used by the natives of this district. The chiefs, who originally held the whole, are called Rajas; and all the other assessed proprietors, originally their vassals, are called Numberdars (Lambadars) from their names in the Collector's books having been entered and numbered in a roll. The owners of free estates are called Mafidars.

CHAPTER VII.

STATE OF ARTS AND COMMERCE. MANUFACTURES, PRICES OF ARTICLES, ETC.

Fine Arts.—In the account of the topography and condition of the people, all that I have to offer on the state of architecture, ancient and modern, has been anticipated. Sculpture is on a footing still more deplorable than in Shahabad, and no one in the district is capable of making even a Lingga. In this district the miserable figures, that on certain occasions are daubed on the walls of houses, are most usually drawn by the women. The dipping the hand in white wash, and stamping a mud wall with the open palm, is considered as a very decent ornament for the house of a person of high rank, and easy circumstances; and, in comparison of the cakes of cow-dung, that more usually occupy such situations, must be admitted as a great improvement.

Women of all ranks sing at marriages, and other festivals; but they never play on any musical instrument, nor sing either for their own amusement, or for that of others. Men of gravity and learning will not sing; but men of all castes, who are rich and luxurious, both play and sing, and both men and women sing on the Holi. No person of character, either male or female, dances. The principal bawlers of hymns in this district are the different castes, who carry the palanquin, the potmakers, and ditchers (Beldars) who sing the divine loves of Rama; and the washermen, who have hymns peculiar to themselves. Among the Moslems the venders of tobacco, fish, and vegetables, are the most noisy, and the weavers are mute, which is rather an unusual circumstance in this profession.

Common Arts.—The washermen have more employment from the natives than in the last districts surveyed, as most of the people wear bleached linen, although they are not at much pains to have it clean, but the cloth for export gives very little employment to this class of men. Those who extract palm wine have either so little skill or encouragement,

that, except in one shop in the capital, kept up, I believe, to supply the Europeans with a ferment for baking bread, none is retailed but during one or two months, when the palms bleed most copiously. The carpenters, who do not work in iron, make coarse household furniture, doors, windows, carts, and other implements of agriculture, and shoes. A few at Gorukhpoor make palanquins, chests, and boxes, and in this town the usual wages of carpenters are from 3 to 4 anas a day, or probably 6 rupees a month, allowing for holydays, &c. Many are employed by timber merchants in squaring logs, and a good many are employed in building boats. This is chiefly carried on upon the banks of the Rapti below the town of Gorukhpoor. The agent of a merchant, who had been employed to build two boats of 1000 *mans* burthen each, gave the following estimate for each.

To 107 logs of Sakhuya timber sawed, at 4 rs., 428 rs ; to 12½ *mans* (667 lbs.) of iron work, 100 rs. ; to ropes and bamboos, 25 rs. ; to five carpenters by contract, 45 rs. ; to food for the carpenters for six months, 48 rs. ; to a present given to the carpenters at launching, 5 rs.—Total 651 rs.

With the agent's expenses, however, and other contingencies, such as the roof, oars, &c. each would cost 700 rs., when fit for the voyage. All the large boats here, called Dhama, are clinker built, very nearly after the fashion of the Patna Patailis, that is to say are sharp at both ends, and have a flat floor, consisting of two rows of planks, the outer transverse and the inner longitudinal. The small boats used for transporting timber are built on canoes, the sides of which are raised with two or three rows of planks, and those of the Gandaki especially, are very good and safe conveyances; but few or none are constructed in this district. They are called Kachhila or Malna, and good ones measure 28 cubits long, 6 wide, and 4 deep. Annually, according to the demand, there are built from 200 to 400 boats, mostly Dhamas, for the various towns in the province of Benares.

The Kaseras of this district are considered different from the Thatheras, although both work in brass and bell-metal; but the former chiefly make or repair vessels, and the latter are employed in making ornaments; but the distinction is not strictly observed. Plates or other shallow vessels are fashioned by the hammer, but deep vessels must be cast, and are smoothed with the file. The Kaseras of Gorukh-

poor, Parraona, and Bakhira, make many new vessels, and the workmen of Gorukhpoor are reckoned better than common. At Bakhira they make chiefly plates and cups of bell-metal. Six men are usually employed together, and in three months make 3 *mans* (96 p. w. a ser) of vessels valued at 240 rs. This requires $97\frac{1}{2}$ sers of copper, value 155 rs. $6\frac{1}{4}$ anas; $22\frac{1}{2}$ sers of tin value 25 rs. 5 anas, and charcoal $4\frac{1}{2}$ rs. Profit, 55 rs. $12\frac{3}{4}$ anas, so that deducting a trifle for shop utensils, &c. they only clear a little more than 3 rs. a month for each man.

A Thathera at the same place in each month makes 10 sers of brass ornaments. The value $21\frac{1}{4}$ rs. He requires $7\frac{1}{2}$ sers of copper worth 11 rs. 15 anas, $3\frac{1}{2}$ sers of zinc (Dasta) worth 3 rs. 15 anas, and 8 anas worth of charcoal. His profit is therefore 4 rs. 14 anas. It was, however, generally admitted, that the Kaseras are more easy in their circumstances than the Thatheras; and those who gave the above statement must have underrated their gains, probably by underrating the quantity of work which they perform. The Thatheras of Bhagulpoor are celebrated for the skill, with which they prepare certain vessels of bell-metal for drinking water, and which admit a polish like silver. They would not give an account of their process. The ser used in the above accounts being 96 paysas is nearly $2\frac{44}{100}$ lbs. avoirdupoise.

Manufacture of thread, strings, tape, cloth, &c.—The greater part of the cotton spun here is imported, after the seeds have been removed; and the whole is beaten and cleaned by the Dhuniyas, before the women who spin commence their operations. Much cotton wool is also fitted by the Dhuniyas for stuffing quilts and pillows. In a few large places the Dhuniyas purchase the cotton as imported, and retail it, when cleaned, to those who want it for use; but in general the good women purchase this material in a rough state, and hire the Dhuniya to beat it with his bow. The tribe has multiplied beyond its resources in the proper line, and some of the Dhuniyas have become weavers. I have endeavoured, by the same means as in Behar to form an estimate of the quantity of cotton thread spun, and the result is, that about 175,600 women spin about 1,106,250 rupees worth of thread, and require cotton wool to the value by retail price of 645,554 rs. The average therefore of one woman's spinning

is little more than $6\frac{1}{4}$ rs. a year, of which the cotton costing about $3\frac{10}{16}$ rs., the average profit is $2\frac{10}{16}$ rs., from which must be deducted the expence of beating, which may reduce the profit to $2\frac{6}{16}$ rs. Most of the cotton being imported free from seed, this will make so little addition to the spinner's profit, that it may be altogether neglected. I do not think that this estimate is materially erroneous, although it is liable to the same objections with that procured in Shahabad, that is the quantity of cotton wool, said to be grown and imported, falls a half short of what such a number of women at this rate would require, and the quantity of thread stated to be required for the weavers does not much exceed one-third of what so many women would spin. This being the case, I have no occasion to repeat what I have said on the similar circumstances in the account of Shahabad. I may add as a corroboration of the opinion, which rejects the statements of the weavers and cotton merchants, both here and in Shahabad, that, unless the number of spinners were as great as I suppose, there would be no employment for the great number of Dhuniyas or cotton cleaners, nor would it be easy to explain how the numbers stated can procure a subsistance by cleaning a smaller quantity of cotton than I suppose to be required. The Dhuniyas here live much like weavers, that is rather poorly; but it cannot be supposed, that each family on an average spends less than 36 rs. a year, or in all 55,296 rs., what I have allowed amounts to 55,800 rs. They make indeed somewhat by beating the cotton used for stuffing quilts; but this will do no more than compensate for the cotton reared in the district, which is usually cleaned by those who spin it.

The weavers in this district are entirely employed in the manufacture of white cotton cloth, mostly very coarse, of the kinds called Gaji and Garha. It was stated, that the total number of families of weavers amounts to 5,145 having 6,114 looms, and that 5,434 of these weave cloth to the value of 522,840 rupees, and require thread to the value of 395,531 rs. According to this each loom makes cloth to the value of about 96 rs. 5 anas 5 pice, requiring thread to the value of 72 rs. 12 anas 7 pice, and leaving a profit for each loom of 23 rs. 8 anas 10 pice. No person here will admit, that a weaver's family can be supported on so small a sum; and,

although the weavers contend that they make up the dffer- ence by farming part of the year, and such may be the case with a few; yet it cannot possibly be the case with many, be- cause the whole weavers in the district would at this rate only make cloth to the annual value in even numbers of 588,346 rs., and would only require thread to the value of 445,000 rs.; I have however stated, that the thread spun amounts to 1,106,250 rs., and a trifle (200 rs.) is stated to be imported, so that allowing 6,450 rs. worth to be applied to other pur- poses, 1,100,000 rs. worth will remain for the loom. This, according to the weaver's account, would make cloth to the value of 1,454,000 rs., which is too little for the use of the country. The clothing of the people cannot be estimated at less than 1,900,000 rs. a year, and it is stated that only about 1,55,500 rs. worth are imported, while 35,000 are exported, and there is reason to think, that this estimate is very much underrated, and that more than double this quantity is sent to Nepal alone. The balance, with what is above supposed to be woven, will only amount to 1,574,500, less by 325,500 than what I suppose necessary for the consumption. It is very probable, that the merchants concealed their dealings to this extent; but as we cannot suppose that the weavers sup- port a family upon 24 rs. a year, so it cannot be supposed that 6,114 looms could weave coarse cloth to the value of 1,574,500 rs. a year, we may therefore safely conclude, 1st, that the merchants both in cotton, wool, and cloth conceal much of their dealings; 2ndly, that the weavers conceal much of their profit, which cannot be less than 36 rs. a year from each loom, allowing even some profit from the fields; and 3rdly, that the landlords conceal many of their weavers, from whom, according to old and general custom, they levy a tax, under the name of ground-rent, for their houses, that is not carried to account in the revenue. The Company for some years made a little cloth in this part of the district, but this has been discontinued. A great deal of the cloth is woven by the weavers on account of the good women, who give the thread, and pay the weaver by the piece. At Nawabgunj it was stated, that the usual hire was 6 anas for a piece of coarse cloth, 24 cubits long and 1¾ broad, containing 600 threads in the warp. A man, according to his own statement, weaves from five to six pieces a month.

At Nawabgunj three families of Kundigars are employed to smooth cloth with the beetle, an instrument which nowhere in India that I have yet seen, has been superseded by the mangle. The Kundigars are chiefly employed by the chintz makers.

The Chhipigar or chintz makers are confined to Nawabgunj, and its immediate vicinity. In all there are 32 houses, and I understood that in none there were less than three men employed, but I could not learn the total number. It was stated that three men, on an average, usually make 100 pieces in a month. The pieces are 10 cubits long and $1\frac{1}{2}$ broad, and the 100 pieces are worth $118\frac{3}{4}$ rs. The cloth costs $74\frac{13}{16}$ rs., the bleaching 1 r., dyes 15 rs., three mens' labour $6\frac{1}{2}$ r., pots 3 anas, leaving a profit to the master of $21\frac{1}{4}$ r.; but in fact the labourers are generally persons of his own family. In general the manufacturers receive advances from the merchant; but sometimes they work on their own account, and stand the chance of a market. A considerable part of the chintz is exported, and composes most of the cloth that is sent out of the district. Allowing on an average each house to have two sets of workmen of three each, which I think is probable, they will make annually 68,800 pieces worth 74,575 rs.

Only one man (Newarbaf) makes tape as the sole profession by which he lives; but this commodity is made by several taylors. The blanket weavers, as none are exported, and a few even imported, are pretty numerous, amounting to 451 houses, in which there probably are 800 men. They all keep sheep. The blankets are usually 5 cubits long and $2\frac{3}{4}$ cubits wide, and such are worth a rupee. Each requires $2\frac{10}{16}$ sers of wool, or about 6 lbs., which is valued at 13 anas, but in fact it is not often sold.

The Patwas, who knit strings, are similar to those of Shahabad. They dye the silk yellow with the Sinduri by the following process. Take $\frac{1}{4}$ ser of carbonate of potash or soda, dissolve it in 2 sers of water, and in the solution boil $\frac{1}{8}$ ser of the sinduri from 48 minutes to an hour. Then dip the silk in the decoction. The colour is permanent. Seventeen houses of sugar boilers have about 24 boilers. At Parraona I procured the following estimate for one boiler.

Produce—50 *mans* (98 p. w. a ser), or 498 + lb. of first quality, 350 rs.;

50 do. of second quality, 312 rs. 8 anas; 225 do. of Kangcha Sira or molasses, 150 rs.; 100 do. of Paka Sira or treacle, 66 rs. 10 anas; 425 *mans* = 3341 + lb.; 879 rs. 2 anas.

Expense—450 *mans* of Rab Gur or thin extract of sugar cane, 675 rs.; Fire-wood, 20 rs.; Pots, 9 rs.; Cloth for strainers, 5 rs.; Three labourers for eight months, 88 rs.; Milk, 4 rs.; Ox hire for bringing home the material, 6 rs.; Water plants, 4 rs.; Iron boiler lasts 4¼ years, 6 rs.; 817 rs. 4 anas.

Some of the sugar is exported, some sold to petty traders (Beparis), who carry it to different market places. They work from about the middle of January until the middle of November, that is, they begin so soon as new extract can be had, and work so long as what they have been able to secure will last, nor do they consider the season as of any consequence.

Manufacture of Salts.—Those who make nitre employ 231 furnaces. Each, I am told by the Company's native agent at Parraona, delivers from 6 to 15 *mans* (96 p. w. a ser, the *man* therefore 97½ + lbs.) of crude nitre. The average is about 12 *mans*, for which the workmen receive 15 rs. Of course they smuggle some, and sell a good deal of a base culinary salt, which remains in the ley, after it has been evaporated and cooled three times to extract the nitre. The nitre of the first evaporation is called Ras; of the second, Kahi; of the third, Lahi, and the saline matter procured by the fourth, is called Jirathi, which sells at 1 ana a ser, or 2½ rs. a *man*, just twice the sum, which the Company allows for the nitre. The making this therefore is the chief object with the workmen. The produce of the three first boilings called Abi, is mixed and sold to the Company for refining. The old earth, from which in former years the nitre has been extracted is always kept, and a portion of it mixed with what is brought from the villages, before the saline matter is separated by lixiviation. The Company has a house for refining at Parraona, and another at Nawabgunj, last year the former sent 1,500 *mans* of refined or crystallized (Kulmi) nitre to the factory, which required 3,000 *mans* of the Abi, procured from this district. Unless the number of boilers has been underrated, each gives the Company 19 *mans* in place of 12, as the agent alleges; but he knew very well what each gave, nor was there on his part the smallest reason for concealment. The number of boilers may therefore be taken at one-half at least more than was reported to me, and entered in the table. A private

merchant had a factory at the same town; and, when the monopoly took place, had a large stock on hand. The Company offered him the same price, that theirs made by the commercial resident's cost; but this was a fair offer, as the Company's authority and monopoly enables the resident to purchase cheaper than an individual can. The agent in Nawabgunj says that he employs 35 boilers, each of which for seven months in the year, gives him three or four *mans* (of the same weight as in Parraona) of crude nitre, or about 24 *mans* in the season. Of course these do not smuggle anything but the culinary salt; of which the agent has no charge. But instead of 35 boilers in his vicinity, I heard of 74 of whom 39 are of course smugglers. Taking all these circumstances into consideration, the 231 boilers, at 24 *mans* each, will give of crude nitre (Abi) 5,544 *mans*, which will give of common marketable nitre (Kulmi) 2,772 *mans*, which cost here about 3 rs. each.

COMMERCE.—The amount of the exports and imports, as taken from the report of the traders in each division, is given in the Appendix, I consider this as of no better authority than the table of the account of Behar;* but, viewing it in the same light I shall proceed to make remarks on each article.

All the kinds of grain imported come chiefly from the territories seized on the plains by the people of Gorkha, and the adjacent parts of the territory belonging to the Nawab Vazir; but some also comes from the district of Saran. Some of them are exported to the part of the district beyond the Ghaghra, and still more to the city of Fyzabad, including Ayodhya; but a considerable quantity is sent to Patna, Benares, Merzapoor, and other towns on the banks of the Ganges. I have no means of ascertaining the quantity better than the reports stated in the tables. The oil is sent to Saran.

The sugar, fine (Chini) and coarse (Shukkur), that is imported, comes chiefly from the part of the district on the right of the Ghaghra, but some also from Sarun. That exported goes chiefly to Patna; but a good deal also is sent to the dominions of Gorkha. The extract of sugar-cane comes

* See Vol. I. Appendix.

from the same parts as the sugar, and some is exported in the same manner, but some goes to Merzapoor, or the towns in the vicinity, where the sugar is made. The treacle and molasses imported, come from the same places with the sugar. None is mentioned in the exports, but there is reason to think that the manufacturers at Parraona send some of the latter especially to Merzapoor.

The tobacco, both in leaf and prepared, comes mostly from Saran and Tirahut, but a little of the latter comes from the part of the district, that has not been surveyed. The turmeric comes from Saran, and is sent to Ayodhya, Benares, and the vicinity of these cities; and a little is sent back to another part of Saran. The amount of the indigo, I take from the quantity of plant said to be reared; 16,000 bundles of 4½ cubits, equal to 20,200 of Puraniya, at 257 for each *man*, will give a little more than 78 *mans*, which at 140 rs. amounts to 10,920 rs.

Timber is here a trade of considerable importance, and I have been kindly favoured by Mr. Fraser, surgeon at Gorukhpoor, with an estimate of the extent of the trade during the last year (1813), while several natives furnished me with estimates of the expense, which attends the various operations undertaken by the timber merchant, who fells, squares, and exports the timber.

The Sakhuya or Sal of Calcutta is the timber of by far the greatest importance. I shall here confine myself to what is cut in this district, as it stood at least in 1813; for part of the forests has been since usurped by the government of Gorkha. The following may be taken as the quantity exported in the year 1813: 5,000 full grown straight Sal timbers from the vicinity of Gorukhpoor, not squared (gol), at from 90 to 1000 rs. a score, 23,750 rs.; 20,000 small but full grown trees, not squared (ekla), from the same vicinity, at from 45 to 50 rs. a score, 47,500 rs.; 21,000 of the same kind, but smaller (Bareri), at from 30 to 35 rs. a score, 34,125 rs.; 12,000 of the same kind, but only two-thirds grown (Gurha), at from 55 to 60 rs. a score, 34,125 rs.; 1,000 of the same kind one-third grown (Balla), at 40 rs. a score, 2,000 rs.; squared beams from the vicinity of the hills (Chaukar), at from 26 to 30 rs. each, 224,000 rs.; 2,000 crooked timbers for ship building (Terhiya), at from 8 to 16 rs. each, 240,000 rs.;—Total, 605,500 rupees.

The round logs are chiefly exported by native merchants, and sold at Patna; and the above-mentioned prices are what the timber sells for at this city, and has been stated to the credit of this district, although a good deal of the boat hire, and some of the labourers hire returns to other places. I could not however, ascertain the proportion. The rounded

timbers, except the kind called Balla, are I am told, from 15 to 21 feet long, and from 12 to 14 finger breadths in diameter at the smaller end. They are cleared from top, branches and bark. The Ballas are from 15 to 22¼ feet long, and from 8 to 10 finger breadths in diameter. Two of the Bhars or other woodmen usually work together, cutting and making ready four of the larger kind, and 6 or 8 of the Ballas daily. Each of the larger logs pays 1 ana for the woodmens' labour, and 4 anas to the proprietor or renter of the forest. The smaller ones pay from ½ to ¾ ana to the woodman, and 2 anas to the proprietor.

When a merchant wishes to enter on this trade, he makes advances of from 50 to 800 rs. at a time, to petty dealers called Maldhanis, who are mostly farmers, of all castes high and low; but they have all carts and cattle for carrying the logs, from where they are felled and cleaned by the woodmen to the river, where the Maldhanis deliver the logs to the merchant, and where they are to be embarked. The Maldhani hires carters to load and convey the carts, which he furnishes. The average price of each log, as delivered at the place of embarkation, varying from 12 anas to 3 rs. may be 1 r. of which it is estimated that the woodman receives 1 ana; the carters 4 anas; the proprietor of the forest 4 anas; the forester (Chaudhuri), who has the charge of the trees ¼ ana; and there remains 6¾ anas to the Maldhani for his trouble and stock. Some of these Maldhanis have no other employment, and work their cattle all the dry season; but the greater part of them, who are farmers, do not commence on the timber until about the middle of December, their cattle until then being at the plough. The merchants ends almost all the round timber to Patna, where he disposes of it. He contracts with boatmen for the carriage, and pays 14 anas for each log, which therefore stands him 1 14-16 r. The whole sale price on an average at Patna is about 2 6-16 rs. so that he has rather more than 26 per cent. for commission, insurance and profit.

The crooked timbers and squared beams are chiefly exported and sold at Calcutta, by two Europeans. These gentlemen, in their extensive dealings, have been under the necessity of incurring a considerable expense in boats, carts, and cattle, as they could not trust entirely to such as could be hired. Before they incurred so heavy an expense, it became necessary that they should secure a supply of timber likely to repay them, and support a large establishment. The plan adopted was to take leases of whole forests, which it was hoped would secure the supply they wanted, and prevent disputes. The former view I believe has been accomplished, but the latter has completely failed. The gentlemen thus renting the forests, have of course secured for themselves such timber as they wanted; but they have allowed the native merchants to cut the other kinds, paying the usual duties, as I have above mentioned. Some of the native merchants complain, that in certain circumstances they have suffered inconvenience, and even loss, from this kind of monopoly introduced by the Europeans; yet I do not think that the measure can be considered in any degree unfair, or that it would have been prudent in any one to have formed a large establishment, without having previously secured a supply: and it is owing entirely to the exertions of the Europeans that the ship

timber and large beams have been procured, the native traders never venturing on an outlay of money that would be necessary to bring out such trees. The profits I believe have been pretty considerable. The crooked timbers on an average do not cost more than a rupee at the place of embarkation, and the freight to Calcutta is probably about two and a half rupees, while the timber sells there for twelve rupees; but besides the above-mentioned expenses, the European is subject to an enormous establishment, which the native merchant in a great measure avoids, and his losses by bad debts are much heavier. The squared beams exported by Europeans are from 24 to 45 feet long, and from 6 to 7 hand breadths across. The crooked timbers are from 18 to 21 feet in length, and from 18 to 23 inches in diameter at the root.

Besides this timber, many small trees, partly Sakhuya, but partly also of various other kinds, are felled and exported to the Nawab's territories and the adjacent districts to the south and east, and are used as posts (Khamba) and beams (Dharna) in the huts and small houses of the natives. Some of this kind of timber is also imported from the parts of the Nawab Vazir's dominions that bound this district towards the north-west. The Sisau timbers are cut chiefly by native merchants, and sent to Patna. In the tables it is only valued at 200 rs.; but Mr. Fraser stated 3000 trees, which at Patna bring from 110 to 120 rs. a score, or 17250 rs. Much timber it must be observed, passes along the Ghaghra from the dominions of Gorkha, on the borders of the Company's district of Bareli, and part of this commerce is carried on by the merchants of Gorukhpoor; but, as it passes merely along the frontier, I shall take no further notice of it.

In the tables, boats are stated to be exported to the value of 2500 rs.; but this, there can be no doubt, is exceedingly underrated. I received information, the accuracy of which I have no reason to doubt, that from 200 to 400 boats were built every year by merchants at a distance, and then loaded and carried away to be employed in different places: 300 boats therefore may be placed to this account. They are from 100 to 2000 *mans* burthen, but by far the greater part carry from 300 to 500 *mans*: 400 *mans* may therefore be taken as the average. The cost of building may be taken at 70 rs. for the 100 *mans*, the value therefore of the whole may be about 84,000 rs., in place of 2500.

Elephants are imported from the dominions of Gorkha, and are sent chiefly to the west. Some, however, are caught in this district; but there are not perhaps more than sufficient to keep up the stock of such as are domesticated. Kine especially oxen, are a much more important article of commerce, almost the whole profit in cattle depending here on breeding. This commerce is, however, on the decline, the extension of

cultivation having prevented many cattle from being exported. They are sent every where to the south of this district, beyond the Ghaghra and Ganges. The buffaloes are mostly young males, sent to the dominions of Gorkha, for slaughter.

Almost the whole Ghiu is made from the milk of buffaloes. That imported, comes from the N.E. part of the Nawab's territory. The exports are to Benares, Patna, Ayodhya, and its vicinity. The goats are males, for sacrifice, sent to the dominions of Gorkha. The fish is dried, either in the sun or smoke, and is sent to the dominions of Nepal. The value is no doubt small, but probably far exceeds that in the table. Almost all the salt is imported from the west of India by the Bangjara merchants, who travel in caravans through the territories of the Nawab Vazir. The remainder is brought either from the last-mentioned country, or comes by water from beyond Allahabad. The quantity imported is probably much more considerable than that stated here, especially as some is probably smuggled into Saran, where sea salt alone can be legally imported. The small export avowed, is to the dominions usurped by the people of Gorkha, and situated on the plains adjacent to this district. The nitre, rated at 4000 rs. in the table, should, of late at least, have been entirely exported by the Company; but, according to the reports of the native agents employed, the actual quantity made is probably 3700 *mans*, of which not above 500 are used in the district, so that the remainder, at 3 r. a *man*, will produce 9600 rs. Of this, what has not been exported by the Company, has probaby been smuggled into Nepal.

The copper, copper-vessels, and copper-coin, all come from the dominions of Gorkha, being the produce of the mines of Palpa, Malebum, &c., and the imports probably exceed considerably what is stated in the tables. None of these articles are stated to be exported, but this I know to be erroneous, for some copper is sent to Merzapoor, and everywhere through the Benares district and Shahabad, a great proportion of the copper currency has been coined, or has come from Gorukhpoor, and is called by that name, while in this district the coin of Palpa, or Butaul, is now in general use. A great quantity of the old coin has therefore been gradually exporting, while new money is annually introduced to the value of about

45,000 rs. The vessels of brass and bell-metal are imported from Chhapra, Patna, and other towns in the east. Those exported are partly sent to Chhapra, but chiefly to Ayodhya and its vicinity. The iron comes mostly from Nepal, but a little from Merzapoor. The iron vessels come from Nepal. I suspect that they are much underrated in the tables. The tin, lead, and zinc, come from Merzapoor and Europe, although it is said that in the dominions of Gorkha there are mines of the two latter metals. The ornaments made of the base metals are imported from Ayodhya and Azemgar.

The exports, according to the tables, exceed the imports to an amount more than sufficient to answer the revenue remitted to government, which, from this part of the district, must be very trifling, as the civil and military establishments in this part must nearly take up its whole amount. Both imports and exports are probably diminished in the tables, and perhaps nearly in the same proportion, but the balance of trade in favour of this part of the district will be greater than stated just as I have mentioned to be the case in Shahabad. Much less, however, is spent here by travellers than in Shahabad, nor does this country receive so much in proportion from natives that are absent on service, while a very large sum must be annually carried away by the ploughmen, who come from other districts. There are also two heavy drains on this part of the district. Pilgrims carry away a good deal, and religious mendicants much more, especially the establishments at Ayodhya, which have here large possessions. The external commerce with Nepal might be, and has occasionally been, pretty considerable; but no dependance can be placed on a government so capricious, and so constantly engaged in the enlargement of its dominions, to which every other consideration is sacrificed. The imports from thence consist of copper, wrought, unwrought, and coined, of iron, rice, dry ginger, a sackcloth called bhangra, wax, a woollen cloth called tus, blankets, paper, elephants, borax, cinnaber, drugs of various kinds, as mentioned among the imports, Thibet cows' tails, and some timber, in all amounting to the value of about 200,000 rs. The exports from this are spices, sugar, cotton, and silk cloths, tobacco, buffaloes, goats, fish, a little salt, and the pulse called arahar; in all amounting to the value of about

100,000 rs. The balance of course is paid in money, although it probably falls short of the sum stated, for I suspect, that arms and nitre are smuggled into the country.

Persons by whom Commerce is conducted.—There are no great wholesale merchants who deal in grain, and the goods called Kerana, and most of the grain is purchased by the merchants of other districts, who partly build and load boats on the lower part of the Rapti, or bring boats from a distance to carry away their purchases; and partly attend the market at Nawabgunj. Both these purchase from petty dealers, who are of three kinds, Grihastha-Beparis, Baradladu-Beparis, and Lerhiya-Beparis. The Grihastha-Beparis, however, in some places are called Garla Mahajon, the name given in Shahabad to those who deal on a great scale. Here they are also occasionally called Bariha-Beparis. They trade exactly in the same manner with the Grihastha-Beparis of Shahabad. Their capitals were stated to be from 50 to 2000 rs., and they probably are not so rich as those in Shahabad, still, however, their stock is perhaps greater than was stated. The Baradladu, or Ladnahara-Beparis, like the Ladu Beparis of Shahabad, deal in all the articles called Garla and Kerana, as do also many of the Telis, or oilmen, who keep cattle for trade. These trading carriers are on the same footing as in Shahabad; but have smaller capitals, none being admitted to have more than 500 rs. besides his cattle.

The Lerhiya-Beparis are all farmers, who have a good stock of cattle, which they occasionally work in the cart, and by this means convey their goods to market. They deal in grain and fire wood, and besides their cattle and carts require a capital of 40 or 50 rupees. The Rakhi Mahajans of Bhagulpoor have capitals of from 20 to 2000 rupees; but two or three houses have 20,000. They deal in Garla, Kerana and cloth, The Kerana Mahajans deal mostly in cloth, brass and bell-metal vessels, iron and spices. I heard no estimate of their capitals.

The cloth merchants or Kapariyas import much more than is exported, but they do not retail, and are mostly strangers. Some of them are itinerants purchasing single pieces from the weavers, and selling by wholesale to shopkeepers or merchants. These export some to Nepal. They have from 100 to 1000 rupees capital. The timber merchants are the

greatest in this district. Two of them are Europeans, and deal to above 20,000 rupees a year each. The natives according to their own account, deal from 500 to 5000 rupees each, but this is much underrated, as the whole amount of their exports exceed 10,000 rupees, and they are only 20 in number. The merchants who deal in firewood, or in firewood and charcoal, might have been considered as a part of the Lerhiya-Beparis, as they deal exactly in the same manner, and have similar capitals. The strangers, who build boats and load them, and also send boats for cargoes, trade largely, exporting most of the grain that is sent from the eastern side of the district, and many of the drugs. I have already mentioned, that the boats built may annually on an average amount to 300, carrying in all about 120,000 *mans*. The boats, that come here for a load, are comparatively small in number, and were stated at about 70 or 80 of about a similar burthen. The grain and other commodities from the western side of the district are chiefly carried by the petty dealers, and sold by wholesale, to the merchants of Ayodhya or Fyzabad, on the banks of the Ghaghra.

The Bangjara merchants import almost the whole salt, and carry away turmeric and dry ginger, which they procure from Saran and Nepal, with a little grain from the northern parts of this district. They are persons of all castes, and of both the Muhammedan and Hindu religion, who have many cattle, with which they wander about in camps or caravans, purchasing in one place, and selling in another. They are secretly armed for their defence, and are alleged to plunder, when ever they can do so with impunity. In Indian armies many are employed for bringing supplies, an employment of which they are peculiarly desirous; as by means of the forces, for whom they act, they very often succeed in procuring the supplies without payment. Men, women, and children follow their cattle, and undergo great hardships, nor can any estimate be formed of the capital, which they possess. Until the British government they had constant wars in this district, and several of the Rajas have fallen by their hands; but now they are perfectly quiet, and allege, that the disputes, which arose, proceeded entirely from the rapacity of the chiefs who wished to levy from them more than the customary duties.

These are all the persons who live entirely by wholesale;

but many shopkeepers who retail import their commodities, selling without distinction whatever quantity may be required. I now proceed to treat of those who retail.

As in Shahabad, the persons who retail grain prepared for the cook, are called Baniyas and Khichri Furosh; but they restrict their dealings to eatables more than in Shahabad, although in general they sell tobacco prepared for the pipe, and some retail cotton. Their capitals are from 4 to 1000 rs. Those whose capitals exceed 400 rs. deal also by wholesale, purchasing considerable quantities, and selling the commodities in small lots to people of the same trade, who are poor. In some places these poor Baniyas are called Parchuniyas, but the name is also given to all other petty retailers. All the Buzaz retail cloth in single pieces, but some export a little, and many import on their own account. Their capitals are stated at from 25 to 2000 rs.

The men, who both retail cloth and change money in this district, are said to have capitals of from 50 to 10,000 rs.; but some of the rich ones lend out part of their capital, and only employ a part in trade. All the Pasaris or druggists sell by retail. They have from 4 rs. to 1000 except one man at Gorukhpoor, who has 30,000 rs., and deals extensively in black pepper and drugs from Nepal; but still has a shop for retailing. Besides drugs the Pasaris often sell ghiu, sugar, betle nut, turmeric, ginger, capsicum, oil, and paper.

The cotton merchants, who are richest, generally import on their own account, although some of them purchase cargoes imported by strangers, and they supply the dealers, who are poorer; but all retail. They are alleged to have capitals of from 50 to 2000 rs., but this is probably underrated, as the trade on the whole must be considerable. The Kungjras chiefly retail vegetables and fruit: a few sell also fish. Their capitals in country places are from ½ to 10 rs.; but in Gorukhpoor some have 200 rs. In this district there are a good many Khattiks, but only some of them sell hot seasoning: all sell vegetables, except those of Kesiya, who retail fire-wood. Their capitals are from ½ to 10 rs.

The Nuniha-Beparis, who retail salt, have capitals of from 20 to 200 rs. At the town of Gorukhpoor is a man who purchases old houses, pulls them down, and sells the bricks. He also contracts for making bricks, and employs the work-

men. His capital is trifling, as he never makes bricks without being paid in advance. The Dahariyas are persons (Brahmans, Rajputs and Ahir) who purchase young cattle in this district, and export them to the south, where they retail them to the farmers, as has been mentioned in the account of Shahabad. Those residing in this district have large herds of breeding cows, besides which they lay out in purchases from 100 to 1000 rs. Almost an equal number of strangers come from other districts to purchase cattle; but I did not learn the amount of their dealings. One man purchases elephants, generally from the Raja of Gorkha, and sends them chiefly to Lakhnau for sale. He deals annually in this article to the value of about 8000 rs.; but he deals also to a large extent in copper coin, and drugs, being a wealthy man. Pedlars in this district are called Bhauriyas, and besides the suspicious article of brass vessels, in which they deal in Shahabad, they sell tobacco, sugar, extract of sugarcane, spices, red lead, and salt. They carry their own goods, and sell from door to door. Their capitals are from 1 to 25 rs. The artificers, who retail their wares in the streets or in shops, are as follows. All the persons of these trades, however, do not retail.

Bari; Sinduriyas; Lakharas; Churiharas; Malis; Inkmakers; Atushbaz; Chamars; Sowarwala; Naychahbund; Tambaku Furosh; Distillers; Pasi; Teli; Dahiyars; Kalwai; Bharbhaj; Daldara; Nanwai; Bukur Kusab; Carpenters; Blacksmiths; Kaseras; Tamberas; Randhaluyas; Potters; and Dhuniyas.

There are here none of the Amdeh-walehs, such as are found in Bengal, and the Barad Sadu Beparis exactly resemble the Sadu Beparis of Shahabad, and on this account have been placed among the wholesale dealers. There are no Dululs, or brokers. The only proper bankers (Kothiwals), reside at Gorukhpoor. One of them, Kanaiya Lal, is the collector's treasurer. He has agents at Calcutta, Benares, and Patna, on whom he will draw; but he is not in the habit of discounting. Although he has regular agents at only the three above mentioned cities, he can draw on Moorshedabad, Lakhnau, and Fyzabad. It is supposed that he has 5000 rs. in circulation. Hari Nayaran also resides, but occasionally goes to Calcutta. His grandfather was very rich; but his son, having had the audacity to lie with a Mogul woman, was very severely

treated by Sujauddoulah. The grandson still, however, has agents at Calcutta, Patna, and Benares, and it is said has 30,000 rs. in circulation. Ram Golam Sahu, of Lakhnau, has an agent at Gorukhpoor, who grants bills on Lakhnau, Fyzabad, and Benares. His capital in circulation here is said to be 10,000 rs. The above mentioned capitals are the amount employed in this district. Each has more employed in other places. Their chief employment is as agents for the Zemindars. They import some fine cloth.

In this district no persons are called Aratiyas, but the people called here Mahajans, Sahu, and Bahariyas, live by lending money. One or two men, who are so called, were said to have only 50 rs. capital; but this is highly improbable. Three men are said to have each 100,000 rs., and several have from 16,000 to 50,000; but the greater part are stated to have from 400 to 10,000. They lend chiefly to farmers, to enable them to pay their rent, and to landlords, to enable them to pay the land-tax; but they also deal in cloth, and the metals. Some of them complain much of the change of government; for under the Nawab's administration, they were allowed to seize their debtors, and enforce payment by the lash; but at present, their debtors hold them in contempt, and dispute payments by the tedious processes of the law. The former custom, however agreeable to the merchant, it would be needless to reprobate; but, without a reasonable means of recovering debts, all confidence must be lost, and great difficulties in money transactions of every kind will arise; for the people here are not much disposed to pay their debts on principles of honesty. For instance, an unfortunate merchant told me, that some years ago he came to this district from the Nawab's territory with 100,000 rs. thinking that it would be safer here. He lent it out on mortgage to different owners of land, making it payable some years hence; but as the debtors neither will pay him interest, nor discharge their arrears to government, their estates will be sold before his debt becomes due, and he will probably lose the whole. The Surrafs here are on the same footing as in Behar. None have less than 10 rupees nor more than 1000; but the bankers (Kothiwals) exchange large sums, when such are wanted. I have already mentioned that several people who retail cloth, act also as money changers.

Weekly Markets.—The weekly markets (Hats, or Pethiyas,) and (Gunjs) marts for exportation, are very nearly on the same footing as in Shahabad, only that several of the latter in this district are of considerable importance. The two terms here also are employed in a very arbitrary manner. The trades in towns and several markets, are under the authority of leading men called usually Chaudhuris. The European traveller, and even residents, can procure scarcely any thing except through these people; nor at Gorukhpoor will they supply any one without an order from the chief native officer of police (Kotwal). At that town the office of Chauduri for the money changers, retailers of cloth, &c. is hereditary, and is said to be worth 10 r. a month. The others, Chaudhuris are chosen by a Pangchayit, or assembly of the trade, or appointed by the collector, that is, probably by some of his understrappers, who take the authority upon themselves. Some of these Chaudhuris have no avowed emolument; but others have dues established by long custom; for instance, the carpenter has from 2 to 4 anas on each marriage in his trade, the sawyer has two anas on each saw, and the Gullah has a handful of grain from each person who imports that commodity on market days. Some people are now beginning to dispute the payment of these dues, and I doubt much if ever the office of Chaudhuris is applied to any useful purpose, except where the Zemindars collect duties, which in many parts of this district they still do. The duty of the Chaudhuri, however, requires that he should detect false weights, and settle disputes on market days; and I have already had occasion to state, that much advantage would result from having an incorporated magistracy in each town. Perhaps the Chaudhuris are the remains of such which may have existed in Hindu times; but their power is now so limited, that it is chiefly directed to encourage impositions on strangers.

Coins, Weights, and Measures.—Bank notes are not at all in currency, and pay one per cent. discount, even when they can be exchanged, and this can only be effected at Gorukhpoor, and there not without difficulty, although they are a legal tender for revenue, and save all the cavil usually made in paying silver. The treasurer of the collector, being a banker, and great money changer, naturally sets his face against the introduction of this kind of money, which does not

suit his purpose, although the Company gains $4\frac{1}{2}$ per cent. by taking the bank note, as for each sicca rupee in the note the collector only receives it at the rate of one Benares rupee. For what reason I do not know, the commissioners of revenue have ordered the collector not to give cash for bank notes, even at the advantageous rate at which they receive the note in payment of revenue; yet by taking the note they would save the expense of remittance; and so sensible is government of this advantage, that the treasury of Calcutta receives cash, and for every hundred sicca rupees gives orders on the Gorukhpoor treasury for $104\frac{1}{2}$ Lakhnau rupees, equal in value to those of Benares. There is no gold at present in currency, and gold coins nominally valued at 16 rs. usually will exchange for from $16\frac{6}{16}$ rs. to $16\frac{10}{16}$.

The collector receives Lakhnau and Benares rupees as of the same value, and in some markets, where the Benares are not common, they are considered as being so; but in others, where Lakhnau rupees are not common, they pay a trifling discount. All along the eastern part of the district, the Benares rupee is the most common, while in the west the Lakhnau coinage prevails. The Calcutta, or Furrokhabad Kaldars are seldom seen, and even the former is considered as of less value than the coin of Benares. Old Moorshedabad money called here Puravi, and some old coinages from the west, called Rekabis, are pretty common in some markets, and sell at a great discount, as do also a few of the old Patna coinage called Sunat. At Gorukhpoor, accounts are usually kept in Muhammedshahi rupees, although the coin is now very seldom seen. In Pali and Nichlaul, a few Nepalese rupees are current, although there is reason to think, from the statements of exports and imports which I received, that cash is annually sent to that country as a balance of trade.

The coinage of copper, since the English government, has been stopt, and a great deal of the money has been exported, so that in the town of Gorukhpoor it was with much trouble that I could procure 200 paysas, in order to estimate the average weight. In its place has been introduced a coinage equally rude, made in Nepal, but called Butauli, because it comes through that town. It is a trifle lighter than the old Gorukhpoor coinage, and 64 may be considered as the average number given for a Benares rupee; but the exchange

varies daily. In remote parts of the district, more of the original coinage remains. Cowries are on the same footing as in Shahabad. The weights vary in every town, both in the number of Paysas equal to each ser, and in the number of sers contained in each *man*, and in most towns there is a heavy (Paka) and light (Kangcha) ser, which occasions an enormous confusion. All the weights are rude stones, but in general they have occasionally been examined and sealed by the Kazis, and in some places the Zemindars have lately assumed the inspection. The magistrates seem to have given themselves very little trouble about this important point. Many indeed allege, that the orders issued to the Kazis have generally turned out a mere pretext, to give these officers a right to exact certain fees from all the people who use weights. At Gorukhpoor and some other places, however, none but sealed weights are allowed; and, if less precaution is used elsewhere, it is probably owing to the magistrates being unable to check the neglect by personal inspection. The scales are on the defective plan usual in this presidency.

The farmers in country markets usually sell grain by measure. The measures are made of wood, and are usually sealed, when that precaution is used with the weights. The most common is the sei, which contains from 1 to 1½ ser of some one grain, according to the custom of the market. The measures are very wide in proportion to their capacity, and are always heaped, which leaves great room for fraud. Sixteen seis are called a mani, and 16 manis make 1 don; but the sei is the only measure in use. The liquid measures are like those of Shahabad. In many places there are professed weighers, called Baya, and Baniya; but the latter term implies also the most common kind of shopkeeper, and also traders in general. Their establishment is not so regular as in Behar or Shahabad.

I am not certain whether or not there is a standard for the land measure in the collector's office; but if there is, no attention has been paid to it in practice, and even in the measurements made by order of the collectors, I am assured, that the only standards used were the different Kazis' arms, which leaves great room for fraud. The bigah everywhere used in the public accounts contains 100 cubits square. All persons measuring cloth know how to apply their arm, so as to measure a cubit of 18 inches with wonderful exactness; but the

Kazis have contrived to produce cubits not only very different from this standard, but from each other. The bigahs used by the landlords differ much from the Company's standard, and from each other; and on many free estates bigahs of an uncommon size have been introduced among the tenants, with a view no doubt of securing a great extent, although I believe, that they are considered by government as entitled only to bigahs of the Company's standard. In some places a measure called Kura is in use, and contains 10 bigahs. A rope is usually employed in land measuring, and the customs respecting the manner in which it is applied, differ as in the districts already surveyed.

Weavers use a yard or Guz, but these vary very much in length, and are all very rudely constructed, so that most people judge of the actual size of the cloth by measuring it with their arm.

Conveyance of goods.—The rivers of this district would admit of water carriage, being much more used, than it is at present. Water carriage is necessarily employed for timber, but by far the greater part of other commodities is sent by land carriage. The reason of this is, that most of the superfluous grain is required for Fyzabad; and, if it were sent down the Rapti, the boats would be obliged to ascend the Ghaghra, a very rapid and tedious navigation. A similar objection, in a stronger degree, prevents the grain of the NE. parts of the districts from being sent to Gorukhpoor by water. The only grain therefore sent by water goes from the banks of the Ghaghra, and of the lower part of the Rapti. Should the whole country however, be brought into cultivation, and much grain be exported, even the smaller rivers would afford easy means of sending it to the towns of Behar and Bengal. In the rainy season they are almost all navigable, and as in Dinajpoor and other neighbouring districts, granaries would be everywhere erected, and in these the grain would be collected, until the rain had swollen the rivers. The boats used in this district for the exportation of grain, are chiefly the Dhamas built here. Except in two large timber heads, projecting from the fore-end of the boat, they differ in nothing remarkable from the Patela of Patna.

The Malnas or Kachhilas used chiefly in the timber trade,

and described in the account of the manufactures, are used for forming floats, which descend the rivers to Patna and Calcutta. The logs for each float are formed into two equal parts, one of which is suspended from each end of two spars, that are lashed across the boat, one near its head, and the other near its stern. From the forests near Gorukhpoor the logs of an ordinary size, which cost 1 r. at the river side, pay a freight of 2¼ rs. to Calcutta, and of 14 anas to Patna. The boatman contracts for this sum, and defrays all expenses. When timber is sent to Benares, as sometimes happens, these floats cannot be used in ascending the Ganges, and the logs must be put in boats of a large size, suited to convey them without their being in the water. A boat of 1,000 *mans* carries from 20 to 30 logs, which usually pay 2 rs. each for freight.

Of late years the merchants not only of this district, but everywhere that I have observed on the Ganges and its branches, have suffered very heavy losses from the carelessness and dissipation of the boatmen, who have become totally unmanageable. They have discovered the very great difficulty, if not impossibility, of their employers obtaining legal redress against people who have nothing, who are paid in advance, and who can in general escape from justice by moving from place to place with the first boat that sails. There is great reason to suspect, that the owners of the boat, or at least the Majhi, who acts for them in the command, connive at the tricks of the men, and taking the full hire allow a part of the crew to desert, giving them a trifle, and keeping the remainder to themselves. The owners of the boats are also totally careless about keeping the goods and the composure with which I have seen the boatmen sitting, while the merchant was tearing his hair, and his property going to ruin was truly astonishing. I would propose as a remedy for this evil, that the European custom-masters should have special authority, and be required to attend and decide in a summary manner, all complaints of freighters against boat-owners, and of boatmen against freighters; for no doubt there are abuses on this side also, neglects on the part of the boatmen, where no redress is procurable, occasioning a violence that is often carried too far.

Almost the only good ferry-boats in the district are those on the upper part of the Ghaghra, and they all belong to the dominions of the Nawab Vazir. On the Rapti at Gorukhpoor there is one very good boat, and below the town, and on some parts of the Ghaghra are a few of a worse description; but in every other part there are only wretched canoes. Floats, however, are made by joining two or three of these, when any European is passing; but such precautions are not used with common passengers. The same kind of canoes, more rude than any thing of the kind that I have seen, are the only boats used by fishermen. The ferry at Gorukhpoor is hereditary property, and its profits enable the owner to keep a Sadabrata; but in general the ferrymen are appointed by the Zemindar, and pay him more or less for the appointment.

A religious mendicant at Gorukhpoor has built some very fine wooden bridges on the road east from that town. They are works that do him great credit, and support the weight of loaded elephants, a very trying carriage. In some places the ferrymen have built temporary wooden bridges, that last during the fair season, and are of vast use, where the fords are bad for loaded cattle. They are paid by voluntary donations given by travellers; but it would be of great use to encourage people to erect such bridges in many more places; by giving them a legal right to collect certain dues; always provided, that no petty officer of government of any sort attends to enforce the collection.

There are a good many roads practicable for carts in the dry season, and some of them are highly useful; but I suspect, that others have been constructed merely for the convenience of gentlemen going on shooting parties. The landholders say, that they have made, and kept the whole in repair, each man doing what was necessary on his own ground, when he was ordered; nor do they complain of any hardship. The common good resulting from most of them is so evident to the meanest capacity, that, where jobs are avoided, no man scruples to perform the labour. The landlords of course did nothing but order their tenants to work. If such has been the case in a district so thinly inhabited, and where the proprietors have of course a great extent of road in proportion to their means, there is no doubt but that

the same plan might be very generally pursued. What is wanted, is that the people should only be required to make roads, which are useful to themselves, and that all should be required to work equally, so that the friends or corrupt favourites of low overseers should not be exempted, and all the burthen thrown on the friendless. The matter at present is left entirely to the judge, who from the nature of his office can seldom know whether the road is necessary or not, and still less whether or not it is in repair. Some strong instances of the inconvenience arising from these circumstances may be seen in this district. A judge has ordered a road to be made, and several landlords have completed their parts, while others, who were tardy, had scarcely commenced, when either a new judge came, or a native officer falsely reported the road finished, and the whole work has been lost, the fragment of a road being totally useless. The duty, therefore, should be vested in the collector, who should be held bound to prosecute the people of every Mauza, who kept the roads leading through it in a state worse than that required by law. I have already said, that the roads necessary, are first such as lead from the offices of police to the capital, and to each other, and secondly those which lead from one market town to those in the vicinity. I have also stated, that these roads need not be adapted to enable a European to drive his carriage with the velocity usual in England: what is required, is to allow the native trader to bring his goods to market during the fair season in carts, and during the rainy season, if possible, on oxen; and at all times to travel with safety on foot or horseback to the stations of the officers of government, who may require his presence. The duty of the collector would be to see, that all necessary roads should be kept up, so far as could be done without oppression, and he should be severely responsible for any unnecessary calls made on the people. Along with the roads, ferries and bridges should be placed entirely under his charge. The former, under proper regulation, might be not only rendered tolerably safe, but might produce a revenue, on which Zemindars, Ghat Majhis, and other persons have somehow or other seized, without paying any sort of attention to the public accommodation.

Wheel carriages are a good deal used for the conveyance

of goods, and would become general did the roads admit of them. The cart (Lerhi) of this country resembles entirely in structure that of Mysore, which has been described in my account of that country. It is not quite so rude, the wheels having spokes, and being of course much lighter. They may be occasionally hired, but seldom without some reluctance on the part of the owners. A few ponies are employed for conveying goods. The asses belong entirely to washermen. By far the most common conveyance for goods consists of cattle, that carry back loads. There are a few buffaloes, and many oxen, which are very good cattle. In many parts they cannot be procured for hire without the interposition of the police. The hire is from 2 to 2½ anas a day. Porters are only used to carry the baggage of travellers, and, owing to the small proportion of the low tribes, are often procured with great difficulty.

The Sadabratas in the district, where all strangers, who apply, may receive a day's entertainment, are as follow: four at Gorukhpoor, two at Bhewapar, one at Lalgunj, and one at Magahar. As usual, none commonly apply but religious mendicants; so that these Sadabratas in fact are highly pernicious, as encouraging this most destructive vermin; and being very seldom of any use to such as ought to travel, although no doubt they sometimes are a succour to travellers in distress. There are a very few inns. They are exactly on the usual footing. In some places, but not in all, the Baniyas admit strangers for hire as in Behar.

HISTORY, TOPOGRAPHY, ANTIQUITIES, &c.

OF

EASTERN INDIA.

BOOK III.

DISTRICT OF DINAJPOOR.

CHAPTER I.

GEOGRAPHY, AREA, SOIL, ELEVATION, RIVERS, LAKES, METEOROLOGY, &c.

The district or zila of Dinajpoor, which forms the extent of the jurisdiction of a judge and magistrate, and of a collector, is situated in the northern part of Bengal. Its greatest length, from its southern extremity at the junction of the Punabhoba with the Mahanonda, to its northern extremity on the Nagor, is 105 B. miles. Its greatest breadth near its southern end between the Korotoya and Nagor, is 82 B. miles. It is somewhat of a triangular form, with its most acute angle to the north, its longest side to the NE.; and its shortest to the south. It extends from 24° 48′ to 26° 18′ N. lat. and its southern extremity is exactly in the meridian of Calcutta.*

* These statements are given on the supposition that Major Rennell's maps are exact. The sub-divisions on these maps are not adapted to the present state of the country, but to the Zemindaries or estates, that existed when they were constructed, and which are now entirely altered. The maps indeed were by far on two small a scale to represent the different estates with any accuracy; for the smaller divisions (Grams) belonging to different proprietors are very much intermixed. No map therefore could represent the boundaries of estates, without being on such a scale as to enable the boundaries of subdivisions to be laid down, and as many of the subdivisions do not exceed 100 acres, the scale would require to be very large.

Published by W.H. Allen & C^o Leadenhall Street, May 1^st 1838.   J. & C. Walker Sc.

The western boundary of this district is very well defined. It is separated from that of Puraniya by the rivers Nagor and Mahanonda to the junction of the latter with the Punabhoba. Its boundary on the south with Rajshahi, is not only destitute of any natural marks, which indeed were not easily procurable; but winds about, and intersects these districts in a manner that is very inconvenient, both in the administration of justice, and in the support of police. This I suppose originally arose from an inclination to accommodate the different proprietors of estates, to whom it is inconvenient and expensive to possess lands in two different jurisdictions, as they must employ an agent at each; but as estates are frequently changing their boundaries, and as in the case in question the estates have been entirely altered, it would perhaps occasion on the whole less inconvenience were the boundary to be rendered somewhat straight, and were detached portions added to the district by which they are surrounded.

On the east, this district is separated from Rongpoor by a river, which owing to frequent changes, that will hereafter be explained, has different names in different parts of its course, but which is usually called the Korotoya. Towards the north the boundary of these two districts is less clearly defined, but is not liable to any particular objection; as it is tolerably straight, and as there are no portions detached.

Dinajpoor, as represented in Major Rennell's maps, consisted entirely of a large estate, which belonged to a family that resided at the town of this name; and contained between 3 or 4,000 square miles. The Zila or present district, however, is much more extensive, and by tracing its boundaries as nearly as I can, on Major Rennell's map, and estimating the extent, I find that it contains 5,374 square B. miles. Such a manner of estimating the extent of the country, I am aware is liable to several objections; the boundary is not laid down by a geographer, neither is the map very correct. No person has a more just respect for the very high abilities of Major Rennell than I have, but his maps of Bengal, I imagine, were constructed in many parts from the reports of native messengers, and the course of rivers is constantly undergoing very rapid changes. What I have here stated, is therefore merely

an approximation to the real situation and extent, founded on the best documents within my reach.

SOIL.—The soil, when dry, is in general of a very light ash colour, often almost white, but becomes dark when moist. In a few places however, chiefly near the Korotoya, the soil is a very red and stiff clay. Such soil wherever found, seems to be called Ranggamati, and many places derive their name from this circumstance; for in Bengal this kind of soil is rather unusual. The common ash-coloured soil, which occupies more than 99 per cent. of the whole district, is of two kinds.

The one in dry weather becomes exceedingly hard and impenetrable, and retains very little moisture, so that in the heats of spring it is entirely destitute of vegetation. In wet weather again it changes into a soft sticky mud. This is called Khyar and Matiyal. The first expresses its parched state during the dry season; the latter is said to be a provincial corruption for Athiyal, which implies its sticky quality during the rainy season. Another derivation is given of the first appellation, it is said to signify saline or alkaline, and much land in Bengal is no doubt of that nature; but this is by no means the case in Dinajpoor.

The other ash-coloured soil contains a much larger proportion of sand. This is much more retentive of moisture than the purer clay, and in the dry season produces more vegetation. Its tenacity also being diminished by the mixture of sand, even the wretched implements and cattle of the natives are able to penetrate it in the dry season, so that it produces a crop with the early rains of spring, while the hard clay is still impenetrable to the plough.

The greater part of the stiff land produces therefore only one crop of rice, which is sown in the middle of the rainy season, but with the occasional rains, that happen in winter and the early part of spring, some portion, often a considerable one, is ploughed, and then produces two crops of rice. A great proportion of the mixed land produces either two crops of that grain, or a great variety of valuable articles that grow in the dry season.

Elevation and appearance.—Although there is nothing in the whole district that approaches to the elevation of a moun-

tain, yet the face of the country is by no means so level as many parts of Bengal, and many parts are more entitled to the appellation of hill, than the elevation in his Majesty's green park. In fact, some parts rise to a considerable height, especially a long ridge extending north from the town of Dinajpoor almost to Kantonogor, and a considerable elevation north-east from Nalagola on the banks of the Brohmani river, which at least rise 100 feet perpendicular height above the level of the inundated country. Although these can scarcely deserve a place in the map, yet as the various degrees of elevation occasion a most essential difference on the produce of the country, they deserve the most minute attention in this inquiry.

In the first place near several of the rivers, especially the Nagor, Mohanonda, Tanggon and the lower part of the Punabhoba, a great deal of land is so low, that every rainy season it is inundated to a great depth; and owing to this circumstance is considered by the natives as almost unfit for cultivation. Many people have imagined, that in level alluvial countries, which are liable to inundation, the banks of the rivers, owing to a more copious deposition of sediment, are higher than the more remote parts. In many cases this may be true, but in this district the parts near rivers are generally not higher than those more remote, and in many places they are much lower. I should imagine, that about seven per cent. of the whole land in this district may be overflowed in the rains, and considered on that account as nearly incapable of cultivation.

The inundated land of a stiffer soil is not all a perfect flat, its surface in many places rises into considerable swells, so that while some portions are covered with 20 feet of water, others are covered with very little, and some project like islands. This is peculiarly the case near the Mahanonda and Nagor rivers, where the most extensive inundations take place, and where a considerable part of this inundated land is cultivated. The higher spots afford situations for villages; but it has often been necessary to assist nature by digging tanks, and to raise the foundations of the houses with the earth thrown out by this operation. It is much to be lamented, that the cultivation of these lands could not be farther extended; for the soil, although in some places

covered by beds of sand, is in general remarkably rich, while in its present state the value of its produce is very small, being chiefly a wretched pasture and long reeds, which are applied to several uses, as will hereafter be described. The advantage, however, arising from either the pasture or the reeds is much more than counterbalanced by the destruction, which is occasioned by the wild animals that such waste land harbours, especially deer, buffaloes, and hogs.

In this portion must be included the Chora land or sandy banks of rivers, which does not readily produce rank vegetation, and therefore is better cultivated than the richer lands, in which reeds vegetate with an astonishing vigour. The Chora land can produce a plentiful but precarious crop of indigo, and a great many cucurbitaceous plants, and sometimes wheat and barley. It is seldom, however, regularly rented, and can only be included among the land, that is sometimes in fallow, sometimes cultivated (Uthit Potil).

No trees grow on this inundated land, and its appearance is as dismal, as its produce is of small value. A considerable portion might be embanked to advantage by the proprietors; and wherever the soil is good, I have no doubt, that it might be cultivated as the lands of Nator are; or it might be cultivated for wheat, barley, mustard-seed, and various kinds of pulse; for the inundation dries up in most places, before the season for sowing these begins. At present nothing is cultivated in it but some poor kinds of rice, that will hereafter be described. Farther, the long reeds might be destroyed, and nothing allowed to grow except short grass, which would feed a great many more cattle than this ground does at present, and would give no harbour to destructive animals; but the right of common pasturage is a complete bar to such an improvement. As this kind of land, however, is a common nuisance, by spreading disease and harbouring wild beasts, the proprietors might, perhaps with justice, be compelled either to clear it, or to part with it to such as would undertake the cultivation; for in its present state it yields no profit to the owner. At present the only step taken to diminish the evil is to burn the dried reeds during the heats of spring. This is not done with sufficient care, neither is it by any means effectual.

The Doangsh or mixed soil, which occupies about 46 per

cent. of the whole ground in this district that is exempt from inundation, differs very much in its manner of cultivation according to its various degrees of elevation. I exclude from this the low sandy banks of rivers called Chora by the natives, although these are a mixture of sand and clay, but they are in general inundated. The proper Doangsh land is capable of producing almost every thing that agrees with the climate, and the vegetation on it is remarkably luxuriant. This in fact, in the present circumstances of the country, is a nuisance. The great variety of lofty flower and fruit-bearing trees, and the luxuriant bamboos by which the cottages are shaded, would render their situation delightful, did not rank weeds and bushes, which shoot up with unceasing vigour in every corner that is not in constant cultivation, prevent all circulation of air, preserve a constant damp noisome vapour, and harbour a great variety of loathsome and pernicious animals. The poverty, shyness, and indolence of the natives, especially the two former, prevent them from removing those nuisances. They are fond of having their houses buried in a thicket, which screens their women from view. These thickets serve them as a place of retreat on all their occasions, which adds very much to the noisome smells that they produce. This is even the case in families of considerable wealth and distinction, as in this district women servants are scarcely procurable.

The lowest parts of the Doangsh land produce one crop of winter rice, which is amazingly rich, and pulse is often sown amongst the growing corn, and ripens among the stubble. This land is eagerly sought after by the farmers, and little of it is waste. The Doangsh, which is somewhat higher, produces in general two crops of rice, which little exceed in value the single crop on the lower lands, and require at least double the labour. In place of a summer and winter crop of rice on this land are sometimes sown Pat and Son, plants used for making cordage.

The parts of this soil, that are neither very high nor low, and that are sufficiently near the house of the cultivator, produce various rich crops, that occupy the soil during the whole year, such as mulberry, sugar-cane, ginger, and turmeric; or they produce a crop of summer rice, followed by wheat, barley, mustard, and other seeds for yielding oil, and

various kinds of pulse, all of which are collectively called Robi by the farmers of this district, as they grow in the season of sunshine. A considerable portion also is cultivated for plants used for chewing or smoking, or as vegetables for the use of the kitchen. Lands of this kind, that are too far from the farm-yard, and on that account receive no manure, produce only one crop of summer rice, or different kinds of the plants called *Arum* by botanists, and Kochu by the natives, the roots of which are esculent. This is land, that seems to me well fitted for the cultivation of cotton, which deserves encouragement.

The highest parts of the Doangsh soil afford situations for the houses and gardens of the cultivators, and for the plantations by which they are surrounded. In the gardens are generally some plants of the Ricinus on the leaves of which the natives raise a species of moth (Bombyx), that spins a very coarse kind of silk. In a few places fishermen rear in their gardens a kind of nettle, which yields a sort of hemp. In many parts this description of land is too extensive for those purposes, and then it is in general much neglected. It is too steep for the regular and constant cultivation of grain, unless it could be regularly manured. A large proportion is occupied by burying grounds, and as a common pasture, where the cattle are turned out, rather to take air than to procure food; as the grass, at least in the season when I saw it, is entirely burnt up. Where not occupied by graves this poor land is usually cultivated once in from three to five years, and after giving one or two crops of rice pulse, esculent roots, turmeric, ginger, cotton, sesamum, is allowed again to remain fallow. This is also the kind of land, that is most usually cultivated for Indigo. The profit that accrues to the owner from this land is very inconsiderable; but the cultivation is of great use, as it prevents those parts of the country from running into long reeds or bushes, which would harbour destructive animals; some part however in several rich districts is reserved for rearing long grass, which is used for thatch and fuel, is regularly cut once a year, and pays a considerable rent.

This diversity of elevation in some parts of the district, especially towards the NE. where the whole soil is Doangsh, occasions a division into Nina and Dangga or low and high,

that has been adopted in the settlement of the revenue. Its origin is not however more regularly attended to than the distinction of Khyar and Poli; for all the land near the cultivator's hut, that produces valuable crops, is reckoned Nina, and is high rented, although it is in general the highest part of the country. The lands that are a little elevated and produce two crops of rice, are called Nina Dangga, or neither low nor high, and the highest lands that are only cultivated occasionally are called Uthit Potit, that is cultivated and waste.

The stiff soil (Khyar) forms a large proportion of the parts of this district that are exempt from inundation, and extensive tracts of it, although sufficiently high to prevent floods from injuring the crops, are yet so very flat, that they are covered with water for four or five months in the year, and form a mud that is almost impassable. Sometimes the rice plains of this nature are intersected by narrow rising grounds, distant a mile or less from each other, and affording a situation where the inhabitants can build their houses. In other places these plains are so extensive, that it has been necessary to dig tanks, so that the earth thrown out might afford room for the dwellings of the cultivators. These tanks are also extremely useful by supplying the inhabitants with water, not only for domestic purposes, but for the irrigation of the fields. The persons therefore by whom they have been constructed are justly entitled to much praise, wherever they have had the utility of the tanks in view; but ostentation, and the desire of fame, have increased the number and size of these works to a destructive extent; especially as no one is sufficiently interested in their repair, which is attended with no reputation. Almost every tank therefore is soon choked with aquatic plants, and becomes a source of noisome smell, bad water, and disease; while there are infinitely more tanks than the habitations of the people can occupy, and much land is for ever rendered useless. It were indeed very much to be wished, that in this district at least the digging new tanks should be altogether prohibited, at least none should be permitted without an investigation into the necessity for its construction, and without proper security being taken from the estate in which it is dug, for its being kept for ever in repair, and free of noisome weeds. The measure at present

taken for this purpose is quite absurd. When the tank is formed, a quantity of mercury is put in the bottom. This is only done in great tanks; and although numberless examples of its inefficacy are constantly before their eyes, the natives continue perfectly credulous. However desirable it might be either to have the old ones cleaned or filled up, the means, I confess are not obvious. The necessity for tanks in this part of the country, it ought to be observed, is much smaller than in many others; for in almost every part wells, constructed at very little expense, produce much better water for domestic purposes than tanks; and with the pains that are bestowed on machinery in the south of India, would answer much better for the irrigation of the fields. At the same time it must be confessed, that this soil is favourable for tanks, the water which they contain being remarkably good, and in a few instances (Ram Sagor and Siddheswori Pushkorini) they produce no weeds.

The high lands and raised banks in this stiff land are not favourable to most kinds of vegetation, and where the declivity is considerable are in general waste. Many kinds of trees, particularly the jak, will not grow in such situations, and bamboos do not thrive so well as in looser soil, still however the mango, banyan, pipol, tamarind and some others are very thriving, bamboos grow to a useful, though not to great size; and the tal and Khejur palms might no doubt be cultivated to great advantage, were their uses known to the inhabitants. Besides affording a dry situation and shelter for the habitations of the people, the elevated parts, where not too steep, produce the seedling rice that is transplanted into the fields. By means of artificial watering, in many parts of the country, this soil produces fine cotton, mulberry and vegetables for the kitchen, especially onions and garlic. The banks of tanks also are favourable for betle leaf. In all such parts of the country however vegetables are scarce, and in many parts the cultivation of mulberry and of cotton, especially of a good quality, is altogether unknown. This last circumstance is particularly to be regretted, as much cotton-wool is imported from territories not subject to the Company.

In this kind of land almost nothing is reserved for pasture, and it is much better occupied than any other soil in this district; perhaps 3 per cent. of it is very poor, and is allowed a

fallow between the crops. Other parts of the district, where the soil is stiff (Khyar), are more uneven, and are in general badly cultivated, but a considerable proportion has been levelled with great pains for producing rice; and as the soil, in such situations, is not so hard as in the more level parts, and contains somewhat more sand, so the nature of the produce approaches nearer to that of the free soils, and most of the articles cultivated on the one are raised also on the other; but in general, where the soil is stiff, every thing except rice is raised only in small quantities for the immediate consumption of the cultivator.

Although the produce of a given extent of ground be small in value when compared with that of some light soils, yet I must say, that I in general observed the condition of the people to be best in the districts which consisted almost entirely of this stiff soil. The hardness of the clay, which renders it a good material for the construction of walls, both of houses and for surrounding the farm yard, gives a comfort to the inhabitants that is unknown to the cultivators of the friable soil; while its dryness, without any assistance, checks that rankness of vegetation by which the villages in a richer soil are overrun with weeds and bushes, that render the vicinity of the houses disgusting and unwholesome, and which shelter serpents, hogs, and various noisome or disagreeable animals.

Rivers.—The rivers of this district are very numerous, and are but ill represented in Major Rennell's maps, in some measure probably owing to his want of sufficient materials, but chiefly perhaps in consequence of changes that have taken place since his time. In a country so level as this, and which consists almost entirely of loose materials, upon which running water has a powerful action, the rivers are not only gradually and constantly changing their place, by wearing away different portions of their banks, but very frequently a small obstacle placed in one of their channels, forces the water to form another, and as that gradually becomes wider, the former is left entirely empty in the dry season, or at least has no current, and forms a stagnant marsh. This generally retains its original name among the neighbouring people, who very naturally continue to perform their religious ceremonies in the same places that their ancestors did, and call a bank by the name that was given to it by their fathers. This has been a source of great

trouble to European geographers, who, endeavouring to trace a great river from where it joins the sea to its most remote source by its principal channel, are astonished to find that it sometimes loses its name altogether; or again, another river, after having for some part lost its original name, if traced further, is found with its former name restored. The geographers of Europe are apt to be enraged, when in tracing a river they find that an inconsiderable stream falling into their grand channel changes its name, and that the source of this smaller stream is obstinately considered by the natives as the source of the river, having either been the first to which they had access, or having at one period been the largest. Geographers are in general very unwilling to admit of these absurdities, and therefore construct their maps according to their own plan, with the same name following the same river from its most remote source to its mouth. It must, however, be confessed, that this improvement, until it shall have been adopted by the inhabitants of the country, is attended with considerable inconvenience to those who wish to use the maps on the spot, and often leads them into most troublesome mistakes. In the following account of the rivers of this district, I shall endeavour to trace them by the names known to the natives.

The Mohanonda and its dependent Rivers.—The Nagor, after running for some way through the district of Puraniya, forms the boundary between that and Dinajpoor, from the northern extremity of the latter, until it joins the Mohanonda for the space of about 90 British miles, without reckoning its various windings, which are very numerous and large. During the dry season, the upper part of this river is not navigable, even for canoes; but during the inundation, boats of considerable burthen can go to the northern extremity of this district, and in this upper part of the river a little commerce is carried on at Mundomala. About 26 miles below where it begins to form the boundary of this district, the Nagor receives a small river named Trinoyoni in the Sangskrita, and Trini in the vulgar dialect, but in common pronunciation the R and I, are usually transposed. Trinoyoni signifies three eyes, and is a name of the spouse of Sib; but Trini, the usual name, has no meaning in the Sangskrita language. This little river runs for about 20 miles, and in the rainy season admits of boats carrying 100 *mans* of rice, by which a little commerce is conducted

at Rupgunj. At all seasons it retains a small stream of good water. Below the mouth of this the Nagor admits always of canoes, but the operations of commerce are of little importance. From the mouth of the Trini to that of the Kulik, in the space of about 34 miles, Jogodol is the only place in this district on the Nagor from whence any exports are made.

The Kulik takes its rise from a marsh in the south-west part of the division of Thakurgram, and after running through the divisions of Ranisongkol, Pirgunj, and Hemtabad, joins the Nagor in the latter, at about 36 British miles from its source, and receives from Pirgunj a small rivulet named Kalayi. No derivation of the Kulik from the Sangskrita that I have heard is feasible, I conclude therefore that the original name has been preserved. The same may be said of the Kalayi. During the greater part of the year, the Kulik is navigable in canoes as far as Songkol, and in the rainy season large boats can go to that place, where there is some trade; but it is at Raygunj that it becomes navigable throughout the year. At all seasons boats of 125 *mans* burthen can come to this great mart, and in the inundation it is frequented by those of a very large size. This is by far the greatest mart in the vicinity, and exports most of the produce of the north-west parts of this district.

The lower part of the Kulik is very deep; but the Nagor, for some way below its junction, is filled with shallows and difficulties, and its banks being much inundated and little cultivated, there are no towns near it in the Dinajpoor district, except Churamon, or Churamohun, until it joins the Mohanonda; but during this space there are several communications between the two rivers, forming large islands, that belong to the Puraniya district, and by which the size of the Nagor is much increased, so that boats of 200 *mans* burthen can at all seasons come to Churamon, and this place accordingly carries on a considerable trade, though much smaller than that of Raygunj. In the Sangskrita language Nagor is said to mean amorous, and to have been adopted in that sense by the polite dialect of Bengal: and this is said to be the source of the name of this river, as connected with some fable concerning its origin. The fable being improbable is perhaps of a much later date than the name, which I should rather suppose is derived

from the original language of the country. Its water is reckoned good.

From where the Mohanonda receives the Nagor to where it is joined by the Punabhoba, it forms the boundary of this district. The name of this river is undoubtedly Sangskrita, signifying great pleasure; for great happiness is promised in a future state to those who die with their feet immersed in its stream. The upper part of its course being in the Puraniya district, I shall say nothing of it here; but in this district it is a large river, containing water that is reckoned wholesome; but its course is very much interrupted with sands, and in the dry season boats carrying more than 200 *mans* cannot come up to Maldeh. At Ayiyargunj it receives the Tanggon, which increases the size so much, that at all seasons boats of 500 *mans* burthen frequent this mart. The commerce on the Mohanonda is therefore very considerable, and Ayiyargunj, Monggolvari, Maldeh, and Nawabgunj, are marts of some importance.

The Tanggon and its Branches.—The Tanggon, which seems to have a barbarous name, enters this district near its northern extremity, and from thence to its junction with the Mohanonda is 96 British miles in a direct line. In its passage it first crosses the division of Thakurgram, where it is a small river, which however admits of canoes during the whole year, and of boats of considerable burthen in the rainy season. In this space is Govind-Nogor, a small mart; and the river is increased by three streams, the Roseya, the Sok, and the Ramdangra. The two former are small streams, arising in the district, and joining the Tanggon from the west; their names signify in the Sangskrita language, sweet juice, and grief; but these explanations having no rational application, their derivation is probably to be sought for in the language that was spoken in this country previous to the Bengalese dialect having received a polish from the Sangskrita. The Ramdangra is an artificial canal, with an elevated bank on one side, and was constructed by Raja Ramnath, of Dinajpoor, as a road between Pran-Nogor and Govind-Nogor, at both of which places the family had seats. The canal communicates between the Tanggon and Punabhoba, and conveys a portion of the latter into the former, at least at the season when I saw it.

The Tanggon then passes through the centre of the division of Pirgunj, where it receives the Nachi, a small stream rising in two branches at no great distance. In this division the Tanggon is a fine little stream like the Punabhoba, at Dinajpoor, and at all seasons admits of goods being transported on it by means of floats, which are supported by canoes. Little commerce however passes this way, and Sadamohol, Ranigunj, and Kornayi, three small marts, export only a small proportion of the produce of the country, which is chiefly carried by land to Raygunj.

After passing through a corner of the division of Kaliyagunj, without change, the Tanggon enters Bongsihari, and passing through it for some way, it afterwards separates that division from Gonggarampoor. In this space also it undergoes little change. There are several small marts on its banks (Besatipara, Sihol, Berakuti, Chondipoor, Kornayi); but most of the produce is carried to the neighbourhood of Maldeh. The Tanggon then passes through a great part of the length of the division of Jogodol. In this it first receives from the west a small river called the Beliya, that is joined by the Chhiramoti, both of which pass through the divisions of Kaliyagunj and Bongsihari, and contain perennial streams of water, but they are not navigable. Below the junction of the Beliya the Tanggon receives from the east a river called the Brohmani, which is in fact a considerable branch of the Punabhoba, and about the middle of its course is still farther augmented by an artificial canal made by a merchant many years ago; but the period cannot now be ascertained. This canal between the Punabhoba and its branch, the Brohmani, increases the latter so much, that boats of 500 *mans* burthen can at all seasons ascend to Nalagola at the junction. Boats of 100 *mans* burthen can pass through this canal to the Punabhoba at all times, and in the rainy season boats of any size (3000 *mans*) can pass from Nalagola by this canal. The Brohmani separates from the Punabhoba about 12 miles below Dinajpoor, and after a course of about 24 miles joins the Tanggon at Bamongola. Even from Nalagola upwards, before it is joined by the canal, it contains more water than the Punabhoba, but it is little navigated. During the rainy season indeed the passage through the canal is shorter. From about the middle of Oc-

tober until the 10th of February boats of 200 *mans* burthen can pass through the Brohmani, and even at the dryest season floats capable of transporting goods could come within 12 miles of Dinajpoor, were it not that towards the end of February a proprietor of land stops the navigation, for the purpose of cultivating a kind of rice, to an extent that is very inconsiderable. Being an officer of the court of circuit he has much influence at Dinajpoor, and his people are informed whenever any gentleman is going that way, so that they may remove the dam, and avoid detection; but the merchant has suffered considerable inconvenience. From Nalagola downwards the Brohmani is navigable at all seasons, and communicates its size to the Tanggon; but it must be observed, that this part of its course is frequently called Kangkri. In the division of Jogodol, however, there is no mart of any consequence on these rivers, although during the dry season, Nalagola may be considered as the part of Dinajpoor, and there is a little commerce at Bamongola, Ranigunj, and Rajnogor.

In passing the whole breadth of the division of Maldeh, the Tanggon continues nearly of the same width. It receives from the west a small rivulet called Dokhariya, from its consisting of two branches, and a small branch of the Mahanonda, which passes through the town of Maldeh, and is called the Beliya. The Tanggon, in its whole course, does much injury by inundating its banks, which in general are very low; and in the lower part of its course, during the rainy season, it spreads out into a very large lake, which extends almost from Bamongola to Maldeh, and which may be 12 miles long and 5 wide.

The Punabhoba and its branches.—The next river, and nearly of the same size, although not of so long a course, is the Punabhoba, which rises from a tank called Bamonpukhor in the north part of Birgunj division, and joins the Mohanonda at the southern extremity of the district, about 72 miles from its source. For about the last 10 miles of its course it forms the boundary between the district of Dinajpoor and Rajshahi. At its source the Punabhoba is a small stream, and soon afterwards it has a communication with the Tanggon, as before mentioned. It continues, however, a pretty little stream, even in the dry season; but is quite unfit

for navigation (except for canoes in the floods), until it reaches the town of Dinajpoor, where it receives a river now much larger than itself, and which is named the Dhepa.

The source of this is more remote than that of the Punabhoba, and is a tank called Sosela Peyala in Thakurgram division, about 12 miles to the north of the source of the Punabhoba. The Dhepa runs south from thence, and is a stream more inconsiderable than the Punabhoba, until it comes near the town of Birgunj, where it receives a very large addition of water from the Atreyi, through an artifical canal, which is called Panjra Kata, from being situated in a district of that name, and Malijol from a small creek that entered the Atreyi, where the canal now separates. This canal was dug by orders of a Muhammedan chief named Sadut Ali, and formerly contained a large quantity of water; but since the Bengal year 1194 (A. D. 1786-7), this has been diminished by an accident, that happened in the Stishta river (Tcesta R.), which I shall afterwards have occasion to describe. At present, during four months of the rainy season, the Dhepa is navigable from Birgunj downwards in large boats, and these boats can then pass through the canal to the Stishta. The river continues open for canoes until about the end of October, but is quite unfit for navigation from thence until the beginning of June. The only mart upon the Dhepa is Birgunj, a place of little consideration. South from Kantonogor the Dhepa communicates with the Gorbheswori or Gabura, a branch of the Atreyi, by means of a small channel called the Kachayi, which contains water in the rainy season only; and which sends to the south a branch of the same name, that separates the town of Dinajpoor into two divisions, and immediately below joins the Punabhoba. Between the lower part of the Kachayi and the Gabura Raja Ramnath of Dinajpoor formed a canal, named the Ghorghora or Ghaghra, which now also has become dry, except in the rainy season. These cuts and channels seem to have been of considerable importance, when Major Rennell constructed his map, and then insulated the town of Dinajpoor. They might be now altogether omitted in a map on a small scale.

The Punabhoba from receiving the Dhepa, until it reaches Ghughudangga, continues much of the same size as the Dhepa

at Birgunj, and does not afford any greater facility to navigation; that is to say, boats of 500 *mans* burthen can ascend it for four months in the year. In this space the only mart is Dinajpoor, or rather one of its suburbs called Kangchonghat. The Punabhoba below Ghughudangga (Dovebank), does not receive any stream, but an inconsiderable rivulet named the Lona, and sends off the Brohmani as before mentioned; yet in the rainy season boats of 1000 *mans* burthen can ascend to Ghughudangga by both branches, which shews the extreme lowness of the country. In fact from thence downwards much of the country is subject to inundation.

From the commencement of this low country to Noyabazar, about 14 miles distant, and including the two extreme places are four considerable marts, and the navigation becomes easier; for boats of 1000 *mans* burthen can ascend from about the 12th of June until the middle of October. Boats of 400 *mans* can ascend a month longer, and floats constructed on canoes can ascend until about the 10th of February.

At Noyabazar, without any apparent addition, the river becomes more navigable, and floats can come to that mart at all seasons. About six miles below, near Kordaho, a considerable mart, the Punabhoba sends the canal, already mentioned, to join the Brohmani, and it sends to the east a branch named Bhangga Dighir Dangra, which seems to have been formed since Major Rennell's survey, and now is in fact the principal branch of the river; for during five months in the year boats of any size can pass through it, and those of 200 *mans* burthen can continue to ascend until about the 10th of March. After receiving a rivulet from the east it rejoins the Punabhoba, about 10 miles below where it separated from that river. In this space there are on the branch two small marts, Bhalukdoho and Teliyaghata; and on the old channel there is one named Jobayi.

From the rejunction of these two branches, to where the Punabhoba unites with the Mahanonda, the river resembles the Tanggon at Bamongola, but is not quite so large. In the dry season it is a muddy narrow channel with scarcely any stream, and winds excessively through a low country covered with reeds, and with extreme difficulty admits of

boats carrying 200 *mans* of rice. In the hot months of spring even these cannot pass. In the rainy season it becomes a great lake, about 20 miles in length, and 3 miles in width, which leaves behind many marshes, that formerly were channels of the river. In the whole of this extent, at least in this district, there is only one mart, Nitpoor or Nitgunj, but that is very considerable. A small rivulet enters from the east, but I did not learn its name. A little beyond the Punabhoba to the east, is Matindro Khari, a rivulet which rises with two branches from the Purusa and Potnitola divisions; and after a course of about twelve miles in this district enters Rajshahi.

Atreyi and its branches.—I now come to the most considerable river of the district the Atreyi, which from the appearance in the maps, would seem to be the direct and principal channel of the Stishta. Where this last name is lost, and where the Atreyi begins, I have not yet been able to learn. It enters this district near its north-east corner, and there receives from the north-west a rivulet named the Pathraj, which for some way forms the boundary between Dinajpoor and Rongpoor. The Atreyi passes for about 84 miles through this district in a straight line, and in the rainy season can be frequented by boats of 500 *mans* for the whole way; but at Jharvari, the mart nearest its upper end, no vessels carrying any load can ascend after the middle of November. Before the alteration in the channel of the Stishta took place, in the year 1787-8, boats carrying 100 *mans* of rice could trade to Jharvari during the whole year.

From the mouth of the Joyram to where the Atreyi sends off a branch called Gabura, in the space of about 15 miles, are Jharvari, Harirghaterbazar, and Khansamagunj, all of which marts have declined much since the decrease of the river.

The Gabura or Gorbheswori rejoins the Atreyi about 14 miles below where it separated. For four months in the year boats of 300 *mans* can pass through it. In the dry season it is a small stream of dirty water full of weeds, and admits of no navigation. It has no marts on its banks, which seem to have been the favorite retreat of the chief servants of the Dinajpoor family, some of whom had handsome houses there, and have now good estates, part of the spoil of their master.

About five miles below the separation of the Gabura a branch called the Kakra, separates from the east side of the Atreyi, and rejoins it about five miles below the rejunction of the Gabura. It resembles that stream, but is rather larger, as during the rainy sesson boats of 500 *mans* can pass through it. Towards the upper part of its course it sends off a branch called the Ichhamoti, which, after receiving a rivulet from the east, and a course of 24 miles rejoins the Atreyi. This branch in the rainy season admits of canoes. There is no mart on the Kakra nor Ichhamoti.

The principal channel of the Atreyi seems little affected by these branches; and in this space are Bhushi, Pheringgir-hat, Sahebgunj, Somdiya, Fakirgunj, Kongyargunj and Tara, marts where there is a considerable trade. In the rainy season boats of from 500 to a 1,000 *mans* burthen can ascend to Bhushi, small boats can go up until the end of January, and boats of 40 or 50 can with some difficulty reach Somdiya at all seasons.

In the remaining part of its course through this district, for about 38 miles, the Atreyi undergoes little change. Boats of 1,000 *mans* frequent it from about the 12th of June to the 14th of October. Until the end of November, it admits of boats of 500 *mans*, and of 100 *mans*, until the middle of January. Until the 10th of February it admits of boats carrying 50 *mans*, and floats carrying that weight can navigate it until the floods return. In the cold season, when I saw this river, it was a gentle clear stream, in some places very deep, in others there were fine fords on a bed of beautiful hard sand. The channel may be about 300 yards wide, and has high banks of a rich soil over which the floods do not rise, since the water of the Stishta altered its course. Formerly considerable damage was occasionally done to the crops; but then the soil is said to have been more fertile, and much less sugar-cane is now cultivated on its bank than was formerly. The only branch that the Atreyi receives in this lower part of its course is one called, in different parts, Mohanaj and Asuri, and Kasiyari. It comes from the north-west, and contains a perennial stream. In the rainy season boats of 200 *mans* can ascend it for some way, but there is no mart on its banks. The marts near this lower part of the Atreyi are Potiram and its port Nawab-bundur, Balurghat, Mahigunj,

Ranggamati, Kanchonghat, Khatabari and Sibgunj, where there is a considerable trade.

East from Atreyi are two small streams, that run into the Rajshahi district after courses of 12 or 14 miles; but are not of any service to commerce. The first called Pherusa, rises from a marsh of the same name, and is said to be artificial, having been dug by Dolel Ray, proprietor of Mosida, in order to drain the marsh or lake. The other named Kungdona, rises from a marsh called Kalna, and after receiving the Gorkha, a smaller rivulet runs into Rajshahi.

The Jomuna and its branches.—I next come to a much finer river the Yomuna or Jomuna, a name which is common to several Indian rivers, and which has been variously corrupted by Europeans into Emona, Jumna and Jubuna. It is a small river with a gentle clear stream of considerable depth. Its water is considered as remarkably pure and wholesome, and its banks are the richest part of the district, and are now little subject to injury from its floods. It has diminished in size since the waters of the Stishta were turned to the east-ward, and is now probably of the size just proper for fertilizing the soil, without injuring the crops. It reaches this district at its north-east corner, separates it from Rongpoor for about three or four miles, and runs through Dinajpoor for 65 miles in a direct line. It first passes through the division of Birgunj and Rajarampoor, where in the rainy season it admits canoes for the tranportation of goods; but there are no marts on this part of its course.

In passing through the next division Hawora, it receives two rivulets from the east. The uppermost named Chita admits of canoes carrying 100 *mans* of rice during the rainy season, but in the cold season it becomes dry, and has no mart. The southern rivulet named Tilayi is more considerable. It contains a stream throughout the year, boats of 4 or 500 *mans* navigate it from about the 12th of June, until the 14th of September, and boats of 200 *mans* can frequent it a month longer. Hawora called also Ranigunj, a very considerable mart, is situated on its eastern side.

In this division the Jomuna itself is frequented by boats of 4 or 500 *mans*, from about the middle of June until the middle of October; and canoes can ascend it, until about the 12th of December, but there is no mart on its banks. It then

passes for about 15 miles through the whole length of Chintamon division. The boats that usually frequent this part of its course in the rainy season, carry from 5 to 600 *mans*, and canoes can navigate it for eight months in the year. Like all the small rivers of Bengal, it is liable to have its channel interrupted, and the navigation injured by trees, which are undermined and allowed to fall into the water. In passing through Chintamon the Jomuna receives no stream, but on its banks are Phulvari, Sujapoor, Khoyervari and Muhammedpoor, all marts, but none of them considerable.

The Jomuna then passes through the division of Lalbazar, and at the town of that name separates into two branches. Before the separation it has two marts Buksigunj and Belamla, both on the decline. The western branch is the most considerable, and preserves the name. Immediately below the separation it receives a stream named the Chiri, which arising in Chintamon division has a course of 18 miles, but is not navigable.

On entering the division of Badolgachhi, the Jomuna receives two other small rivers from Chintamon, which pass also through Lalbazar, and are nearly of the same size, having courses of from 25 to 30 miles, and during the rainy season both are navigable in canoes or small boats. The first or eastern is called Podmawoti and also Chiri, which occasions great confusion. The western of these small rivers is called Ghushki, and during the rainy season inundates its banks to a considerable extent. This branch of the Jomuna is navigable at all seasons for canoes, and very small boats, and in the rainy season admits of boats carrying 1,000 *mans* as far as Kisorgunj. The marts on it are Kisorgunj, and opposite to it Syamgunj and Badolgachhi.

The eastern branch of the Jomuna is called Kata Jomuna, and is said to be an artificial canal, which was made by a very rich merchant, ancestor of Baidyonath Mondol, at present the principal landholder in the vicinity. In the rainy season it admits of vessels carrying 4 or 500 *mans*, and possesses two small marts Joypoor, and Yamalgunj or Jamalgung. At the former is the residence of the founder, Baidyonath Chaudhuri, which is more like the residence of a gentleman or man of rank, than any other place in the district.

About nine miles from its separation from the principal

branch the Kalla Jomuna joins the Tulosi, a small river, which rises in the division of Lalbazar from a marsh called Roktodoho, and afterwards it forms the boundary between that and Khyitlal, between this again and Bodolgachhi, and for a short way between Dinajpoor and Rajshahi, and it then joins the western branch of the Jomuna. In the first part of its course, the Tulosi is very inconsiderable; but it soon receives an addition from the Harawoti, which running through the adjacent angles of Ghoraghat, Khyettal and Lalbazar, admits of small boats during the rainy season, and has on its banks two small marts, Chhrishti and Pirerhat. It sends off a branch to the east, which from its name, Katahari, is probably artificial, connects the Harawoti with another small river the Nagor, and is also navigable in the rainy season for canoes. The only spring of water, that I observed in this district, was on the bank of the Katahari, and it is a very fine one. It has escaped the notice of the natives, who in other parts of India would not have failed to have made it a place of religious worship.

Below the junction of the Harawoti the Tulosi receives a small river from the east. It is named Itakhola, and during the rainy season is navigable in canoes. Between the Jomuna and Korotoya, in the south east part of this district, are the sources of three rivers belonging to Rajshahi, and all capable during the rainy season of conveying goods in canoes. The most westerly is Degangpoleshto, and the next is Dinggaduba. Both of these join a river of Rajshahi named the Bakhora, of which I see no traces in Major Rennell's map. The most easterly of these three rivers is the Nagor, which receives the Katahari from the Harawoti, as before mentioned. It joins the Korotoya at Sibgunj; but separating again immediately forms one of the principal rivers of Rajshahi.

The Korotoya and its Branches.—The Korotoya, which in general forms the boundary between Dinajpoor and Rongpoor, is very difficult to trace, owing probably to the many changes, that have taken place in its course, and in those of the neighbouring rivers. Its upper part passes through the district of Rongpoor to the frontier of Dinajpoor, and exclusive of windings, descends along that for about 22 miles, where it divides into two branches, the Kalonodi, and the Ghrinayi, and at the separation it loses it name. Previous to this it is

a small river, that has suffered considerably by the change in the direction of the Stishta; but still it swells considerably in the rainy season, and then admits of boats, which carry 100 *mans* of rice and canoes and floats loaded with 50 *mans* can pass until December. On this part of the river is a mart called Buksigunj. There also the Korotoya receives the Khorkhorya, which comes from Rongpoor district, and after running parallel to the Korotoya for some way, joins it from the west. Small boats can frequent it in the rainy season, and it has a small mart called Fakirgunj. The Korotoya in this part also receives a small rivulet from Dinajpoor called the Sonarbangah.

The western branch of the Korotoya called Kalonodi, or the river of death, has one mart named Uttora, and seems to me to have been the original channel of the river; for it goes in the direction of Nawabgunj, where we again recover the name: and Major Rennell, brings to this place a small branch of the Korotoya, which is now lost. At present two small rivers the Nolsisha and Asuli join at Nawabgunj, and their united streams are called the Korotoya. During the rainy season both of these rivulets admit of small boats, but no marts have been established on their banks. The Asuli is a very large channel, and no doubt has at one time contained a larger river. The Korotoya for about 15 miles from Nawabgunj to Ranigunj, both considerable marts, admits boats of 7 or 8 hundred *mans* burthen, during the rainy season. A little below Ranigunj the water of the Korotoya in the dry season turns suddenly towards the east, and joins the Stishta by a small channel called the Mauliya, while the proper channel of the river extending from Ranigunj to Ghoraghat, is of great size, but in many places is dry, while in others it contains deep and large pools of water. The eastern branch of the Korotoya, where that river loses its name, as I have before mentioned, is called the Ghrinayi, and is nearly of the same size with the upper part of the river, but has no mart. It forms the eastern boundary of Dinajpoor for about eight miles, when it joins the large river called Stishta. The Stishta is called also Jamuneswori or Yomuneswori. The latter name seems to be the most proper, and the name Stishta seems to have been given to it, since the greater part of the water of that river has been diverted to this channel,

which happened in the year 1787-8. I observe however, that Major Rennell gives it this name in his survey, which was made long before the time, to which I allude, The Stishta since that time has increased greatly in size, and its inundations have done considerable injury to agriculture. It is navigable at all seasons for boats of 200 *mans*, and in the rainy season admits those of the greatest burthen; yet after forming the boundary of Dinajpoor for 18 miles, exclusive of winding, it loses its name, where it joins the dry channel of the Korotoya at Ghoraghat. On the Dinajpoor side there is no mart on its bank.

The Korotoya after receiving the Stishta at Ghoraghat, forms the boundary of Dinajpoor for 15 miles, and admits of the same kind of navigation. On the Dinajpoor side are Ghoraghat, Sahebgung, Kengiyagunj, Gumanigunj and Gujya all marts where there is considerable trade.

General Remarks.—On the whole it must be evident, that changes in the course of rivers are attended with great loss, and inconvenience. The new channel is so much land lost, and the old one leaves behind it a marsh or kind of lake, which for ages is rather injurious than of use. At the same time the vicinity of the new course is deluged with water from the smallness of the channel, and the banks of the old course are often deprived of fertility, and still more certainly of the means for conveying their produce to market. The towns must therefore disappear, and the uncertainty of their place of abode seems to be one of the reasons, which prevents the inhabitants of Bengal from building more substantial and comfortable houses. The forming new cuts for the purpose of commerce seems on this account very dangerous, and except near the sea should in general be avoided.

In a country however so level and of so loose a soil, such sudden changes cannot perhaps be altogether prevented. All, that I can propose for the purpose, is to remove in time the most usual cause of change, which is the trees that fall into the rivers, and which collecting sand round them form banks, that obstruct the channel, and not only occasion great and sudden changes in the course of the rivers, but impede navigation. On the mouldering bank of every river may be observed trees growing close to the precipice, gradually undermining, and then falling in and lying to rot; for the pro-

prietors will not allow them to be cut or removed, while growing, and afterwards they are in general of no value, except for fuel, and the expence of cutting them for that purpose exceeds the means of the neighbouring poor. Some of the kinds are venerated by the Hindus, who consider it as sinful to cut them. I am persuaded therefore, that it would be an useful regulation to direct, that every land holder should remove the trees, which are growing within 20 feet of a mouldering bank, and where he neglected or avoided doing it, that a proper officer of police should clear the bank, and charge the proprietor a reasonable price for the labour.

Lakes and Marshes.—In this district there is no proper lake; although during the rainy season some of the rivers, especially the Tanggon and Punabhoba, swell out so as to resemble very fine ones. Many marshes (Bils) then also are enlarged into a kind of lakes, and even in the dry season retain a little water in their centres. I am persuaded, that in these marshes there are many fine springs, although I only observed one, and although the natives every where denied having noticed them; but in such inquiries they have little curiosity, and these marshes give rise to many little perennial streams, which can only be supported by springs. The edges of these marshes are often very fine land, and are called Kandor, indeed by the lower classes Bil and Kandor are often considered as synonymous.

The deserted channels of large rivers also contain large quantities of stagnant water, always in the rainy season, and sometimes even in the parching heats of spring; and have a resemblance to lakes. These are properly called Jhil by the natives; but it must be confessed, that they often use Jhil and Bil very indiscriminately, although the two kinds of place are of a very distinct nature.

Meteorology.—There have been no observations of any accuracy made on the air and weather of this district; what I have been able to collect, is chiefly from the reports of the natives, totally destitute of science, and of the means for making accurate observations. When a country is intersected by very large rivers, I imagine, that the winds are much affected by their course. In the south of Bengal the prevailing winds are north and south. In Vehar or Behar the winds are east and west, and the same is the case in Asam. In Dinaj-

poor the course of the rivers is north and south; but the rivers are so small, when compared with the Ganges and Brohmoputro, that their influence is much checked, and the winds here are more variable, than in any part of India, that I have visited. On the whole, however, the east winds are by far the most prevalent, and are very usual even at the season in which I have stated other winds to be the most common.

The rainy season, as at Calcutta, usually begins about the 12th of June, is accompanied by much thunder, and ends nearly about the 14th of October. The rain most commonly comes from the east; but towards the end of this season there are pretty often light southerly winds, which increase the heat, and the nights then are very close and suffocating. In favourable seasons there ought to be one or two days heavy rain between the middle of October and the middle of November; and if these fail, the crop of rice is very scanty.

Again from the 12th of March to the 12th of May there are usually strong winds from the west, which are generally hot, but are often interrupted by squalls from the NW., sometimes arising to storms, and usually accompanied by thunder, rain, and often hail of a very great size. The clerk of division Rajarampoor declares, that he saw one hail stone six inches in diameter, and that during the storm, in which this fell, several people and cattle were killed, and that the hail broke through the roofs of several huts. From the middle of May until the commencement of the proper rainy season, the winds are light, and come usually from the east, and the heat is great; but not so violent as at Calcutta. The heat continues strong, until about the middle of September, when the nights at least become somewhat moderate. From the middle of October until the middle of February the winds are light, and there are very heavy fogs and dews. The east winds are most prevalent in the beginning of this period, and the north towards its end. When the fogs and dews commence early, it is expected, that there will be much rain early in the season, which I have found verified this year. The west winds usually blow cool, pleasant and dry, with a fine clear sky, from the middle of February until the middle of March, which is no doubt the finest time of the year. Two days fog, that happened early in February, during my

journey, were considered as very remarkable. From the begining of November, indeed, until the beginning of April, I experienced the weather to be delightful. During, November, December, January and February, the cold is at times troublesome, and the Europeans use fires in their chambers, and woollen clothing. The natives enjoy neither luxury, and suffer exceedingly. All night they shiver and lament; and in the morning continue benumbed, both in body and mind, until the sun acquires some height, dispels the fogs, and invigorates them by his chearing beams.

Natives of Calcutta, who have lived here for some years, think, that on the whole the heats and thunder are more severe at Calcutta than at Dinajpoor. Whenever the east winds prevail, the people are sickly, and health is restored by those from the west. The most violent and only hurricane remembered was in November 1787 (Kartik 1194), and came from the N.E.

CHAPTER II.

HISTORY OF THE DISTRICT OF DINAJPOOR.

HINDU GOVERNMENT.—The tradition belonging to this district, which is referred to the earliest period by the Hindus,* is that it was under the government of Porosuram, a very powerful monarch, who had subject to him twenty-two princes, and who lived at Mohasthangor (Mustangur R.) in Rajshahi, near the frontier of this district. The Brahmans, whom I have consulted, consider this personage as the same with the sixth incarnation of the god Vishnu, who appeared an immense number of years ago, and on this account I have placed this tradition first; but the common belief of the country is, that Porosuram of Mohasthan was destroyed by a Muhammedan saint named Shah Sultan Hazrut Auliya. This does not appear remarkable to the Brahmans, as they consider that Porosuram is still on earth, and that he now resides in the western parts of India. The ruins of Mohasthan are said to be very considerable.

The tradition referring to the next highest antiquity is that of Ram king of Oyodhya (Oude), and seventh incarnation of the god Vishnu. After his return from Longka, this hero could not avoid suspecting, that his spouse Sita had granted favours to Ravon, while she was in the power of that prince. He therefore separated from her, and she retired to this province, which was the residence of Balmik, a very holy person of these times. She was attended by Lokhymon the brother of Ram, and during her abode here was delivered of a son named Nob, and the saint gave her another named Kus. These two sons attacked Ram, and in consequence of their success he was induced to restore their mother to his bed.

At a great interval, but still in the most remote antiquity, a personage named Boli Raja governed in this country. He

* In this district tradition is remarkably obscure, owing to the Hindus having at one time been nearly eradicated.

was an Osur, or person, who opposed the worship of the gods, and is now suffering the punishment of his heresy in a place under the earth called Patal. The Pandit of the survey has no doubt, that this was the Boli Raja of whose house the ruins are shown, but some traditions place him only a few hundred years ago. Even this tradition, however, acknowledges him to have been the father of a still more distinguished personage, Ban Raja, who appears to have governed this country with great distinction. He also was an Osur, that is to say he was a worshipper of Sib, and opposed Krishno, king of Brindabon and of Mothura, who was a follower of Vishnu, and indeed is considered as the eighth incarnation of that God. Ban Raja seems to have lived in much more splendor than his father, and to have been a very superstitious prince. He introduced that severe mode of worship, in which the votary is swung round, while suspended from a lever by iron hooks, which are passed through the skin of the back. As people formerly lived a long time, he employed a thousand years in this penance, and obtained the favour of Sib, who promised that no god should have power to kill him. He was a very great hero, having had no less than 1000 arms; and Sib bestowed on him two ponds, Amrito and Jevot; those who drank the water of the former were invulnerable, and those who drank the water of the latter, when wounded, were immediately cured. While Ban Raja was governing with great glory, Oniruddho, grandson of Krishno, came in disguise to his court, and corrupted his daughter Usha. Ban Raja was naturally enraged, and being ignorant of the high rank of the young man, placed him in a horrid dungeon. In order to liberate his grandson, Krishno came with a great army, and attacked Ban Raja, and a severe engagement took place near the palace of Usha. In this battle Ban Raja lost 998 of his arms, which were burned in triumph at Kordaho, on the banks of the Punabhoba. It was during this war that fever first appeared, and in hopes of being saved in that disease, many persons labouring under it read the history of the war, or the Ban Juddho Stob. The protection of Sib, however, saved Ban Raja, and the water of his ponds saved his troops; so that Krishno was unable to take the city, and peace of course was made, on condition that the young prince should

be released, and marry the princess. Krishno, however, could not forget the injury, and sometime afterwards a barbarous people, which devoured cows, and who were called Yovon or Jovon, having entered the country, and having procured the government of Hostinapoor, were sent by the god to attack Ban Raja, He instructed them to defile the water of the ponds by means of beef tied to the foot of a kite, which frequented them to drink, and this having been done, the city of Ban Raja became an easy prey to the barbarians. Ban Raja, although by nature immortal, was so enraged, that he deserted his body.

These wars between the princes, considered as incarnations of Vishnu, and the Osurs or princes who worshipped Sib, such as Ravon and Ban, no doubt refer to the time, when the worship of these deities was still in recent vigour, and each was contending for superiority. There is little doubt, but that the Yovon are the Macedonians of Bactria, who obtained large possessions in India, and, if any reliance can be placed on this legend, the times of Krishno cannot be of very remote antiquity. The story, however, rests on the authority of one of the Purans attributed to Vyas, which probably are very modern compositions, although the foundation of the legends, which they contain, may have been borrowed from books that have been since lost.

The next personage of this country who is celebrated in tradition is Virat Raja, king of Motsyodes, a name which is still retained by the whole of this district, except a small portion east from the proper Kotoya, for that river separated Motsyo from Kamrup, which was then governed by a prince named Bhogodotto. The boundaries of Motyo towards the south and west I have not yet exactly learned, as they certainly included at least portions of Rajshahi and Puroniya, which I have not visited. In the war which took place between Yudishthir and Duryodhon for the throne of Hostinapoor, and the supremacy of India, Virat Raja assisted the former or successful side, while his neighbour, as usual, joined with the opposite party. The mother of Virat Raja happened to be impregnated by means of a fish. The circumstances being very indecent shall not be mentioned; but it is on this account, that this vicinity has been called Motsyodes, or the country of the fish. The war between Yud-

hishthir and his competitor is usually placed by the present Hindu chronologists about 3,200 years before the birth of Christ; but here a great difficulty occurs, Ban Raja preceded the time of Yudhishthir, and yet his city is taken, and his government is destroyed by the Yovons, who beyond doubt were the Macedonians. I must however say, that the ruins alleged to have belonged to Virat, who was contemporary with Yudhishthir, everywhere betray a greater appearance of rude antiquity, than those which are considered as the works of Ban Raja, and my Pandit has probably been mistaken in placing the latter prince earliest. Virat and his son were killed in the war.

The next princes of whom any traces remain, had the common name of Pal; and of these many works are to be seen in this district. In the Ayeen Akbery these princes are placed as a dynasty governing Bengal between the dynasties of Adisur, and Bollalsen, which Abul Fazil considered as distinct. This however, by no means accords with the common traditions of the country. These state, that on a certain occasion 12 persons of very high distinction, and mostly named Pal, came from the west country to perform a religious ceremony in the Korotoya river, but arrived too late; and as the next season for performing this ceremony was 12 years distant, they in the interval took up their abode here, built palaces and temples, dug tanks, and performed many other great works. They are said to have been of a tribe called Bhungiya, to which also the Raja of Kasi (Benares R.) and Betiya belong. From inscriptions remaining, and which have been published in the Asiatic Researches, it is well known, that the Pals were powerful kings; and according to Captain Wilford, (As. Res. vol. 9, p. 203,) the first of them, Bhupal or Mohipal, was alive in the year of Christ 1017, when his country was disturbed by the invasion of Sultan Mahmud, who took Kasi, and penetrated far into Bengal. It was probably on this occasion, that Mohipal retired to this remote part of the country with his family and principal officers, and it is probable, that according to tradition they returned again to the west after a few years stay, and after the terror of the Muhammedan invaders had subsided.

The traditions given here concerning the next dynasty differ also very much from the Ayeen Akbery. They make

Bollalsen the immediate successor of Adisur, who was a person of the Baidyo or medical tribe, that procured the government of Bengal, but still subject to the princes of the west. He lived partly at Gaur in the immediate vicinity of this district, but chiefly at Vikrompoor, about eight miles south-east from Dhaka. Adisur's tribe being descended from a Brahman and a Sudra woman, he probably had a reverence for the sacred order, and accordingly he introduced five families of them from Kanyokubjo (Konoje R.) Whether there were any Brahmans in this district before that time, or whether they had been all destroyed by the Pal family, who worshipped Buddha, I cannot take upon myself to say; but no traces of any ancient families remain, and all those who are now to be found in this district, are descended from these five families of Adisur, or from a still later colony (Baidik), which came from the same place a few centuries ago.

It has indeed been said, that one of the ten nations of Brahmans called Gaur, were the original Brahmans of Bengal, and derived their name from its capital. This supposition, however, seems to me attended with great difficulties. The present Gaur Brahmans occupy the country near Delhi, and no account can trace their emigration from Bengal. Besides Gaur did not become the capital of Bengal, until immediately before the Muhammedan conquest, and it was the princes of the dynasty of Adisur, who first bestowed on it that supremacy; so that, if any Brahmans had derived a name from this city, it should have been those of the five tribes introduced by that family. I am therefore disposed to think, that Mr. Colebrooke was well founded when he supposed, that the country of the Gaur Brahmans is situated in the west of India. It must however be confessed, that the Brahmans whom I have consulted, place the country (Des) called Gaur below Patna, in the vicinity of Janggira, one of the most holy places on the Ganges.

Adisur's wife had a son named Bollalsen, who was begotten by the Brohmoputro river, in the convenient form of a Brahman. This son succeeded Adisur, and regulated the different castes as they now stand in Bengal. It seems to have been owing to this, that the medical tribe, being that of the prince who regulated the precedence, has been placed next in rank to the Brahmans. Bollalsen was succeeded by Lokhymon

Sen, who according to the traditions here, had a son named Madhob Sen, and he a son named Su Sen. As in the Ayeen Akbery the last king of this dynasty is named Luckmeenyah the son of Luckmen; it is possible, that Lokhymon the first may have had a son of the same name, who succeeded his nephew Su Sen, although by the Hindus the latter is usually considered as their last king. Captain Wilford assigns good reasons for believing, that Lokymon was expelled by the Mahommedans, A. D. 1207, (As. Res. vol. 9, p. 203.)

During the government of this dynasty, a division of the country which was subject to them took place, and is still remembered. Gaur being the capital, formed the centre division, and was surrounded by five great provinces; 1st, Barondro, bounded by the Mohanondra on the west, by the Podma (Ganges R.) on the south, by the Korotoya on the east, and by neighbouring governments to the north; 2d, Bonggo, or the territory east from the Korotoya towards the Brohmoputro. The capital of Bengal, both afterwards and before having been long near Dhaka, in the province of Bonggo, this name is said to have been communicated to the whole; 3d, Bagri, or the Delta, called also Dwip, or the island, bounded on one side by the Podma, on another by the sea, and on the third by the Bhagirothi (Hoogley R.); 4th, Rarhi, bounded by the Bhagirothi (Ganges and Hoogley R.), on the north and east, and by the adjacent kingdoms on the west and south; 5th, Maithilo, bounded by the Mohanonda and Gaur on the east, by the Bhagirothi on the south, and by adjacent countries on the west and north. The extent of these provinces towards the west, east, and north, I have not been able to ascertain; but it certainly fell far short of the present limits of Bengal, especially towards the east and north. Barondro, which includes part of Rajshahi and Dinajpoor, did not extend so far north as the town of this name, and ends at Dumdumah, about 18 miles south from it. Whether or not the whole of the northern parts of this district beyond the limits of the kingdom of Gaur, were subject to one prince at the time of the Muhammedan invasion, I cannot say, because there are many ruins in these parts; but little or nothing of the history of any of the founders remains on tradition, except that a certain Mohes Raja seems, from the ruins of his house, to have been a prince of some consequence, and according to tra-

dition he was overthrown by the Muhammedans at a very late period.

The traditionary account of the native princes of the country differs so much from that given by Abul Fazil, that I have great doubts concerning its approach to accuracy, especially as the deplorable state of learning in this country has prevented me from finding any person versed in tracing the families of the Brahmans introduced by Adisur, and who are called Ghotok, and Kulacharyo, none of whom are to be found in Dinajpoor nor Ranggamati. It must however be observed, that the dates A. D. 1017 and 1207, ascertained in a manner not liable to any error of above 30 or 40 years, as the times of the first Pal king and of the last native prince of Bengal, are totally irreconcilable with the 858 years assigned by the Ayeen Akbery for the two dynasties. Indeed, the small number of princes and great number of years in Hindu chronology have introduced innumerable difficulties; for instance, the Ayeen Akbery makes 10 Pals reign 698 years, or 70 years each.

According to the Ayeen Akbery (Luckmeenyah) Lokhymon was king of Bengal at the time of its conquest, and then resided at Nodiya, or more properly Nobodwip. On the approach of the Muhammedan army, the Raja made his escape in a boat. This last circumstance agrees in part with the tradition of the country, which states, that the Raja being afraid of the destruction of Brahmans and sacred animals, which resistance might occasion, deserted his body, a power which holy men are supposed to possess, and which is called Oprokot, or Onuddes. The Muhammedan account will of course appear most probable to a (Mlechho) barbarian, who will suppose that the Raja, being afraid, retired to his more remote capital, Vikrompoor, and endeavoured to obtain the best terms which he could, especially as we now find a family who pretend to be his descendants, and who still possess considerable estates in that vicinity. Rajbollobh, the grandfather of the present representative was in very affluent circumstances, and purchased from the Brahmans at a great expense (it is said 10 lacks of rupees) the privilege for the medical caste of wearing a thread like the sacred order, from whom the physicians of Bengal are descended. We shall also find, that Sonargang, near Vikrompoor, continued to be a place of refuge

for those who were discontented at Gaur, and was not finally reduced until a long time after the overthrow of Lokhymon.

Muhammedan Government.—The Muhammedan general, Muhammed Bukhtyar Khulje, having destroyed Nodiya, rendered Gaur again the seat of government. This city is also called Lucknowty (Lokhymonawoti), from the son of Bollal Sen, who added much to its greatness; and those parts of Bengal which were subject to the throne of Delhi, continued according to the Ayeen Akbery, to be governed for about 150 years by viceroys, who resided at this capital. According to the same authority, three different persons, about the end of that time, usurped the government; but by the people here, and according to a manuscript account, which I procured at Peruya, Shamsudin, the last of these usurpers, is considered as the first Muhammedan king of Bengal. According to this manuscript, Firuz Shah, king of Delhi, was a dissolute prince, fond of hunting in company with his women, one of whom was corrupted by Shamsudin, then a servant of Alawudin, a principal officer under the king. The culprit having secreted himself, the king was enraged with the master, and sent him to Azut Khan, governor of Bengal, I suppose with a view of having him killed. On the road he met with a holy man, Shyekh Jalaludin, of Tabriz, who prophesied to him that he would be king, and requested that he would then bestow an endowment on him. I suppose the holy man also discovered to the noble the design of his being sent to Bengal; as the manuscript states that he immediately killed Azmut Khan, and seized on the government. He only, however, assumed the title of Muktagh, or governor; but retained his authority for 20 years. He probably neglected the saint, who, according to the manuscript, seems to have assisted the fugitive servant, Shamsudin, to seize on the government. After having murdered Alawudin, under the disguise of a religious mendicant, by the advice of the saint Jalal, of Tabriz, usually called Mukhdum Shah, Shamsudin fixed the seat of his government at Peruya, and assumed the title of king. The new monarch built a great palace, and made war on Ibrahim, governor of Behar, on the part of Firuz. Two saints being consulted on the occasion, one gave it as his opinion, that Firuz would be successful, the other gave an opinion directly con-

trary. The royal party, however, repulsed the usurper. The emperor then invaded Bengal, and the usurper being afraid, retired to Ghoraghat; but an agreement was made, and Firuz returned to Delhi. Shamsudin governed 12 years, and was succeeded by his son Sekundur, who built a very large mosque, named Adinah, as would appear from an inscription remaining on it, in the year of the Hegira 707. It must, however, be observed, that in this inscription, which ought to be indubitable authority, Sultan Sekundur is called son of Sultan Shah Jalal, contrary to both the Ayeen Akbery and the manuscript. The usurper, however, may have had several names, as usual among Muhammedans. I suspect that this date is not reconcilable either with the supposition of Abul Fazel, that the kings of Delhi governed Bengal 150 years before the rebellion, or with the supposition in the manuscript, that Ala-udin rebelled in the reign of Firuz; but I have not at present the means of finding out the years of our era corresponding with those of the Hegira. It must also be observed, that this date is scarcely reconcilable with that on an inscription in Gonggarampoor, where in the year of the Hegira 718, the governor of the province acknowledges the supremacy of Delhi (Hostma); and another inscription, dated 765, mentions Sekundur Shah, son of Majahud Shah, son of Ayas Shah, who I have no doubt was king of Bengal. The most celebrated person in the reign of Sekundur, was a holy man named Mukhdum Alalhuk, whose son, Azem Khan, was commander of the troops. The saint having taken disgust at some part of the king's conduct, retired to Sonargang, near Dhaka, where the Hindu princes probably still retained considerable authority, if not independence. The good man was, however, soon after induced to return; but the king's son, Ghyashudin, having also taken disgust, retired to the same place, and afterwards made war against his father, who, after a reign of 32 years, fell in battle at a place called Satra, near Goyalpara, probably the Chattera of Major Rennell, which is situated between the Tanggon and Punabhoba, near a favourite country residence of the king.

Ghyashudin, on succeeding to the government, put seventeen brothers to death. The most holy man at his court was Mukdum Shah Nur Kotub Alum, son of Alalhuk, who attempted to make a peace with a Shaheb Khan, with whom

Ghyashudin had been carrying on an unsuccessful war. While the treaty was going forward, Ghyashudin seized on his adversary. He governed sixteen years, and was succeeded by his son Syafudin, who governed three years, and was succeeded by his slave Sahabudin, who also governed three years.

Then Gones, a Hindu, and Hakim, of Dynwaj (perhaps a petty Hindu chief of Dinajpoor), seized the government. Enraged at Sheykh Bodor Islam, and his son, Fyezislam, who refused to give him the compliment due to the rank he had assumed, he put them to death. The saint Kotab Shah, who was still alive, disgusted at this action, wrote to a Sultan Ibrahim, who seems to have retained part of the kingdom, while the remainder fell to the share of Gones, and who, in compliance with the request, came from Rajmohol with an army, and encamped at Satra. The Raja of Dynwaj was then terrified, and applied in great penitence to Kotub Shah, and obtained his forgiveness, by making his son Godusen a Muhammedan. This convert assumed the government under the name of Jalaludin, and having been reconciled to the saint, attacked Ibrahim Shah, grandfather of Hoseyn Shah, and having put him to death, seized on his government. The old man Gones, then confined his son, and seized on the whole kingdom. After having been four years in confinement, Jalaludin recovered the government, and compelled the Hindus to become Muhammedans; but many of them fled to Kamrup, that is to say, the country beyond the Korotoya, and which was then probably independent. He governed seven years, and was succeeded by his son Ahmed Shah, who reigned three years. He was destroyed by two of his nobles, Sadi-Khan and Nuzur Khan, the latter of whom was made king, and erected many buildings at Gaur, to which he seems to have transferred the royal residence. He governed 27 years, and was succeeded by Sultan Barbuck Shah, who governed 16 years. He was succeeded by Yosuf Shah, a very learned prince, who governed 6 years. His son Futeh Shah, governed 7 years, when he was killed by a slave of Barbuk Shah, named Khwajeh Soray, who governed 6 months, and was put to death by an Abyssinian, named Firuz Shah, who governed 3 years. Mozofur Shah then governed 3 years.

Then Sultan Hoseyn Shah, son of Saiud Ashruf, son of

Ibrahim Shah became king, and seems to have been by far the most powerful of the sovereigns of Bengal. He is said to have conquered Kamrup, that is the country to the east of the upper part of the Korotoya, and to have killed its king, Harup Narayon, son of Malkongyar, son of Sada Lokymon. He also conquered Audysah (Orissa), and Kamchah, and governed 27 years. He was succeeded by Nusrut Shah, who was killed while asleep, by his servant Khwajeh Soray, after a reign of 13 years. His son Firuz Shah governed nine months, when he was killed by his uncle Mahmud Shah. A person named Alum Shah (probably governor of Behar) was killed in war by Mahmud, and his successor Sheer Shah (who before his usurpation of Delhi was governor of Behar) sent troops to revenge his cause. Mahmud implored the assistance of Hamayun king of Delhi, who came to his assistance. The two sons of Sheer Shah, Selim Shah and Khawas Khan, defeated both princes. Mahmud escaped to a strong fort named Dorweyshpoor, and Hamayun fled to Kalgang; where soon afterwards he was joined by Mahmud. This prince having learned that his fortress had been taken, and his two sons put to death, was seized with a mortal disease, and died after a government of five years. Hamayun now went to Gaur, where he lived for some months. In the meantime Sheer Shah subdued Sonargong and Chatgam. The former was no doubt the remnant of the Hindu kingdom of Bengal, near Dhaka, and which seems to have included Bonggo proper; the latter is the country, which we call Chittagong. He then attacked Hamayun's army at Mongger, and entirely defeated it. Sheer Shah governed nine years, and was succeeded by Islam or Selim, who governed 10 years. Then Sheer Shah his son governed some days, and was killed by Muhammed Adli, who was an intolerable tyrant, and was dethroned by Muhammed Khan, who governed one year, when Muhammed Adli attacked him. The other Muhammed resigned his government to Behadur Shah, who defeated Muhammed Adli in a battle at Surujgur (or Surjyoger), and then took the kingdom from a Shahabaz Khan, who seems to have stolen into it during the dispute. He governed six years. His brother Jalaludin governed five years. His son was king for 17 days, when he was deprived of his government by Ghyashudin, who only retained

it 15 days, and was killed by Tajkhan of Kermani. He was able to retain the government six months. His brother Suleyman succeeded, and having plundered Gaur, removed the seat of government to Kosba Haveli Tandah. He was also king of Audisah, and governed 10 years. His son Baized Kermani governed 13 days, and was killed by Hansu, who had married his sister; but after the murder he ran away, and a certain Daud Kermani became king, caught Hansu and put him to death. At Patna he fought with the Khan Khanas, who had been ordered by Muhammed Akber Shah, the king's son (that is the king of Delhi) to seize on him. The Mogul nobles (Khan Khanas) obtained the victory, and drove Daud into Rajmahal, and he was killed in another battle by Mozofur and Hoseyn Kuli, two of the Mogul officers, when the whole of Bengal returned again to the dominion of Delhi. I have detailed this chronology at full length, because it differs considerably from that in the Ayeen Akbery, and is probably more correct.

Hoseyn, certainly one of the most powerful kings of Gaur, is altogether omitted by Abul Fazel, unless he be the same with Alaudin the second of that name, who also succeeded a Mozofur. The chronology of the manuscripts evidently ends with the last year of Hamayun (A. D. 1554-5), because Akber is mentioned as a king's son, and his father governed only part of two years after his return to India. This would place the commencement of the rebellion, allowing for the shortness of Muhammedan years, in the year 1315, a year even before the accession of Muhammed the predecessor of Firuz III. The time therefore granted to the reigns in the manuscript is perhaps too long; for it comprehends 240 solar years; but Firuz began to reign in 1351, and the Bengal kingdom was overthrown 1555, which allows 204 years only, or 36 years less than the chronology in the manuscript. This indeed seems to protract the time after Sheer Shah unreasonably, unless we suppose, that it is wrong in styling Akber the king's son, and that he had really been king for a considerable number of years before he reduced Bengal. For, from the retreat of Hamayun to his death were only 14 years, and the manuscript gives 41 years government to Sheer Shah, and his successors, or 27 years too much, unless they continued

to govern Bengal until the 27th year of Akber, which is indeed very probable. This would reduce the difference between the manuscript and Ayeen Akbery to nine years.

The nature of the government of these Muhammedan kings is, I believe, little known; as usual, they seem to have enjoyed little security for their lives or government; and so far as I can learn, were in general furious bigots, much under the influence of men dedicated to a religious life, and called *Pirs* or saints. In every part of the Dinajpoor district are to be found the tombs, or monuments of these personages; and the most remarkable contain traces to show, that they have been erected on the ruins of Hindu buildings, and in all probability of temples. The account in the manuscript, concerning the total conversion or expulsion of the Hindus by Jaladin, is confirmed by the present state of religion in this province, as I shall afterwards have occasion to show.

CHAPTER III.

TOPOGRAPHY,* ANTIQUITIES, &c. OF EACH DISTRICT OF DINAJPOOR.

Town of Dinajpoor.—The first division comprehends the town of Dinajpoor and its immediate vicinity, extending about two miles from north to south and about the same from east to west. It is bounded by the Dhepa and Punabhoba on the west, by the Ghorghora on the south, and by two large tanks Sukhsagor and Onontosagor on the east. On the north there is no well defined boundary. The whole is placed in the centre of another division named Rajarampoor. The police is under the care of a native officer styled Kotwal, and small suits are determined by an officer of the judge's court named Munsuf. It is intersected by the channel

* During the government of Akber new divisions took place, and are still remembered, and continued in writings descriptive of lands, although more recent divisions have been adopted both in the administration of justice, and collection of revenue. Of the 24 Sirkars, into which Bengal was then divided, this district contains part of six, viz. Panjra, Tajpoor, Jennutabad, Ghoraghat, Barbukabad, and Bazuba. The divisions of Akber seem however to have been but ill arranged, and the districts belonging to each were very much interspersed with those belonging to others. They were subdivided into Mahals, analogous very nearly to the present Pergunahs, which have been as ill arranged as the Sirkars. Almost each Pergunah has peculiar customs or regulations, which affect the tenures, under which it is cultivated. It would therefore have been highly desirable for me to have followed this division in the more topographical account, which I am about to give; but the different small divisions of each Pergunah, called Mauzas, Dehas, Gangs or Grams, are so intermixed with those of other Pergunahs, that I found this impracticable. Nor could it be adopted, unless the country were surveyed on a scale sufficiently large to allow the boundaries of the Mauzas to be defined. In the following account, therefore, I shall detail whatever I observed remarkable in the division attached to each Thanah, or office of police, that is placed under the management of a native officer usually called a Darogah or Thanadar. When I come to treat of the tenures of landed estates, I shall mention the Pergunahs, that are contained in the district, with an account of the changes, that have happened in their proprietors, and the peculiar customs relative to each.

of the Kachayi, which in the spring is nearly dry; but in the rainy season contains much water. The soil is mostly of the sandy kind called Chora, and has at one time or other been all worn away, and again thrown up by the rivers, by which it is on all sides surrounded. It is however very ill supplied with water. The streams are small, and swarm with insects, and the wells afford no water, but what is considered as unwholesome. The district may contain four square miles, of which perhaps 160 acres are cultivated fields, 1600 acres are occupied by houses and gardens, 640 acres are common pasture, and 160 acres are useless from roads, sands, rivers and ponds.

The town may be divided into four portions. First, Dinajpoor proper, on the east side of the Kachayi, where the Raja's house is situated. This part consists chiefly of detached houses surrounded by gardens, yet it contains many people. Second, Rajgunj which, properly speaking, is the town, and occupies the centre of the district on the west bank of the Kachayi. It is about a mile in diameter, and closely built, but consists almost entirely of thatched huts. Near the middle it has a square surrounded, somewhat like Covent Garden (to compare small things with great), with a row of tiled sheds, which occupy the inner side of the four streets, and serve as shops for retailing various articles. The other streets are quite irregular. Third, Kangchon ghat, which may be considered as the port, is situated on the Punabhoba at some distance from Rajgunj, and is occupied by merchants, warehouses, and the people who are required to attend on them. It is tolerably closely built, and may be about half a mile in diameter. Fourth, Paharpoor contains the houses of the European officers of government, the public offices, the jail, and the houses and gardens belonging to those whose attendance is immediately required. Like Dinajpoor proper this consists chiefly of scattered houses and gardens intermixed with common pasture. From what I could learn, the houses (Vari or Bari), or rather dwellings are about 5000; but many dwellings contain 10 huts, and the greater part above two. In a terrible fire, which happened in the year 1807, and which destroyed the greater part of Rajgunj, the Kotwal reported 8000 houses burned, by which I suppose he meant huts, for from the dimensions of the town, as I

have stated, there could not have been so many abodes. This officer of police is besides far from being an accurate man; he could not, for instance, inform me, whether his district extended one or two coss in any direction.

I estimate the population, from the number of houses, at between 25 and 30,000 persons. The roads are kept in excellent repair, by the labour of convicts, and the town, as far as outward view, is remarkably clean and well watched, owing to the great exertions of the magistrate, for he has had much trouble, in bringing the former about. The town, as I have before stated, is badly supplied with water, and no attempt has been ever made to light it. Indeed, so far as I know, no such thing was ever attempted in India.

It contains no public building of the least consideration, and decent bridges are very much wanted. The Raja's house was of a great size, but since the decay of the family has gone to ruin. It was mostly built 30 years ago, and consists of a strange mixture of European, Moorish and Hindu styles, all in the very worst taste. In other respects it was very becoming the fortune of the proprietors, who with ordinary management might have lived more like princes than subjects. It contains several temples; but these, being appropriated to the family, cannot properly be enumerated among the places of public worship. It has been surrounded by a ditch and rampart of earth, called by the natives a Ramdangra. These are now neglected, as neither necessary for safety, nor effectual for rebellion. The houses* of the European gentlemen and public offices are also abundantly large, but are built in the very worst style of Anglo-Indian architecture; that is to say, are entirely destitute of elegance and convenience. Exclusive of these there are about eight dwellings built partly of brick.

Dinajpoor signifies the abode of beggars, and it still is a very poor place. Whether or not it is the same with Dynwaj, the governor (Hakim) of which, Gones, usurped the government of Gaur, I cannot say. I understood at the place, that it entirely owed its consequence, first to the residence of the Rajas, a very recent event, and afterwards to that of the officers of government, and that the decay of the Raja's

* Many of these apparently trifling details are given in illustration of the general poverty of the people.—Ed.

Ganes.

London. 1838. W. H. Allen & Co. 7, Leadenhall St.

J. Netherclift Lithog.

family and diminution of the river, since the year 1787, have hurt it considerably. It is situated in Pergunah Vijoynogor, of which it contains 16 Mauzas, or subdivisions. It contains four places, where there is a daily market (Bazar) for provisions, and other small articles, and twice a week there is a larger assemblage of people in the square, where cloth chiefly is sold. Besides there is daily a small market at the Raja's gate.

The Hindus have no place of public worship of the least note. The Muhammedans have one small mosque kept in good repair. There is no remarkable antiquity about the place, except an image of Ganes, of which I have directed a drawing to be made (plate 1), because the image was brought from the ruins of Bannogor, and is therefore of great antiquity; and also because the image is reckoned very handsome. To my judgement the drawing is rather flattering; but it must be confessed, that the image represents a gay deity, dancing on a Lotus flower, although it is not suited to the fastidious taste of a Roman artist.

RAJARAMPOOR.—The division of Rajarampoor surrounds the town on all sides, and is of a very irregular semi-circular shape. It may be about 33 miles from W.S.W. to E.N.E. and 17 miles from N.N.W. to E.S.E., and contains about 340 square miles. About 103 square miles may consist of a free loose soil and perhaps 20 miles are sandy banks of rivers liable to be inundated, of which a half may be occasionally cultivated; 154 miles are of a stiff ash coloured clay. The country fully occupied, including houses, gardens and fields under regular cultivation, may be 212 miles, of which perhaps 85 are of a free soil, and 127 are stiff clay. The following estimate, was given by those I consulted. Of the 128 miles of waste land, 42 miles are in tanks, of which one half are entirely useless and choked with weeds; 21 are in marshes, rivers and water courses; 15 under woods and bamboos; 10 occupied by common pasture, roads, market-places, and burial grounds; but the banks of tanks, woods, and waste land serve also for pasture; and 20 miles of deserted land. I imagine, that the extent of the tanks is exaggerated; although in this division the pernicious custom of digging them has been carried to an unusual length. The extent of woods also I suspect is exaggerated. They consist mostly of

the trees and bamboos, which grow on lands, that were formerly occupied by villages; S.W. from Dinajpoor, however there is a small wood of Sal (Shorea robusta) which may contain about four square miles, and which seems to have sprung up, within these 50 or 60 years, in land that was reserved for the Raja's hunting. The country is badly wooded, a great many villages having little or no shelter except bamboos. There are 29 market places, of which three are marts for exportation, four are held in villages of some note, and the remainder are held in the open fields, or have only a few houses round them. Bhusi on the Atreyi, and Ghughudangga on the Punabhoba are the only places, that can claim the title of towns; the former contains about 250 dwellings, and the latter about 190. Neither of them has a single brick house, nor any buildings worth notice. The native officers of police and justice (Darogah and Munsuf) reside near Rajarampoor, a small place, where there are two or three brick houses belonging to Brahmans and servants, that formerly depended on the Raja.

Five proprietors of estates reside in this division, although only one of them lives on his Zemindary. He is brother and heir of the person, who was manager of Raja Ramnath's estate, is of the Raja's family, and has a handsome house in the Anglo-Indian style. The abodes of the others are built on free lands, and are decent habitations, partly brick and partly thatched. The Raja's Purohit, or family priest, has a very respectable brick house. Altogether about 15 houses are built wholly or in part of that material. There is no remarkable ruin nor remain of antiquity in this division, but at Josonabad, on the Atreyi, a ghat or descent into the river has been dedicated by Vyas, and about 5000 people assemble annually to bathe on a movable holiday in spring (Varuni). At what period of his life this great personage sanctified the place I cannot say, as it is commonly alleged, that he was born some what more than 5000 years ago, and that he is still alive at Bodorikasrom near the source of the Ganges. Indeed his whole history seems attended with very great difficulties for the Brahmans claim him with eagerness, while it is in general allowed, that his mother was of an impure tribe. The only Hindu building dedicated to worship, and of considerable size, is the temple of Gopal, at a little distance north from

Dinajpoor. It is fast hastening to ruin, having been begun by Prannath and finished by Ramnath in the year 1743; and as its crevices now shelter the Pipol tree, which no one would be so impious as to destroy. The most remarkable place of Muhammedan worship is the tomb of Chehel Gaje, who is supposed to have been a saint of the largest size, as the dimensions of his grave testify, for it is 60 feet in length, and 12 in breadth, and is supposed to have been suited to his remarkable stature. The buildings are situated just on the north side of the town of Dinajpoor; and except the grave are rather ruinous; but have never been very remarkable, either for size or elegance.

The only other public works in this district are four tanks dug by the Rajas' family. Three of them, however, Sukhsagor, Matasagor, and Anontosagor are not very remarkable; but have been joined by a canal and rampart, running south from the first to the last, and including the other. It is called a Ram Dangra, which is a name given to a fortification and was dug by a Janoki Ram, who managed the affairs of the family during the minority of the last Raja. Whether or not, from some idle view of greatness, he intended to complete the fortification on all sides, is not known, as in the middle of his career he was thrown into jail for debt, by a native merchant of Calcutta. The 4th tank called Ramsagor is about six miles south from Dinajpoor. The water is about 3300 feet in length by 850 in breadth. The banks occupy 200 feet, and are very ugly, the soil being so hard, that little or no vegetation has taken place on them; and they are so steep, that they are entirely useless. The water however is remarkably good, and the soil is so stiff, that no weeds have as yet grown in it.

Birgunj.—Contains about 340 square miles, is somewhat of a square form, and is about 23 miles from north to south, and 19 from east to west. The Darogah resides at Birgunj near its centre. About 32 miles are destroyed by rivers, water courses, tanks and marshes. In the rainy season 12 are inundated, of which half may be low sandy land, occasionally cultivated. Setting aside the forty-four miles inundated, or destroyed by water, about 180 miles are of a free soil, and 116 of hard clay; twelve are occupied by woods, chiefly where former towns have stood. The largest of these is round Prannogor, on the Punabhoba, and consists of the

kinds of trees, that usually grow near villages. There is no proper forest in this district; but it is very well wooded, and adorned with many bamboos. The land fully occupied may be 76 miles of hard soil, and 154 of free mould; 10 miles are occupied by roads, markets, burial grounds and sterile places, and 44 have been deserted, or are only cultivated occasionally.

In the whole division there is no dwelling house of brick, and very few have mud walls. The only place of worship of any considerable size, that belongs to the Hindu, is Kantonogor, built in the ruins of a fort, that belonged to Virat Raja. This temple is by far the finest, that I have seen in Bengal. It was begun to be built by Prannoth, who brought the image of Kanto (Vishnu) from Delhi. In 1704 the first foundation was laid. In 1713 a larger building commenced, and in 1722 the foundation of the finest part was begun. Although it received a complete repair from Mr. Hatch, a few years ago, and although until lately it was a favourite residence of the family, young trees are fast obtaining possession of the wall, and it will soon be a ruin. This the natives do not seem to regret; as the place, having been erected and dedicated by a mere man, is not considered as holy. The Muhammedans have no place of worship of any considerable size or note.

The principal antiquity in the division is Uttor Gogriho round Kantonogor. It is said to have been one of the places where Virat Raja kept his herds of cattle, and extends at least a mile each way along the eastern side of the Dhepa, and both sides of the Kachayi. This space is surrounded and intersected by high ramparts of earth; but these are so overgrown with trees, bushes, and reeds, that I could not trace their form, which seems to have been very irregular. In one place I observed four ramparts with three intermediate ditches. Within the fortifications are several mounds of earth, in all probability artificial, and perhaps the ruins of large mud-walled buildings, that may have been occupied by the watchmen of the prince. There are no bricks in either the ramparts or mounds. In fact there is nothing about these ruins that can contradict the tradition of their being of great antiquity, and of their having been applied to the purpose mentioned. Their extent is great, but in an age, when according to all accounts the greater part of India was over-

grown with forest, and when the chief wealth was probably cattle, the princes are likely to have possessed numerous herds, and large ramparts would be necessary to allow them room to subsist, during the incursions of neighbours, who in general seem to have had predatory habits. The place too is very near the frontier of Bhogodotto, an enemy. The only other ruin of antiquity is at Sonka, about four miles east from Birgunj, on the Atreyi river.

The only public works, deserving notice, are the canals, which join the Atreyi with the Dhepa, and the Punabhoba with the Tanggon, which have been already described. The public markets in this division are thirty-five, four of them are marts for the exportation and importation of goods, and about six others form small villages. The remaining twenty-five are in the open fields. There is no place that can properly be called a town; neither Khansama nor Jharvari, the two largest places, contain 100 houses.

THAKURGRAM.—Is the largest division in this district, of which it occupies the northern extremity. It contains about 400 square miles, and is 30 miles from east to west, and 25 from north to south. Almost the whole of this division consists of a sandy soil, of which perhaps one-fourth is a poor thin mould. The country indeed is of so light a soil, than iron is seldom used in the plough. About 300 miles are cultivated. The low land, exclusive of rivers, marshes, and water courses, is very rich, is all cultivated, and amounts to about 150 miles. The high land, that is fully and properly cultivated, may be 75 miles. That which is deserted, or only cultivated occasionally may be 50 miles. This is partly overgrown with trees and bushes. The land, that is unfit for cultivation, may be about 45 miles, of which 25 is destroyed by water, rivers, marshes, &c.; and 20 miles are burial-grounds, roads, market-places, steep banks, or wretched soil. The villages are well sheltered with fruit trees and bamboos, and there are few or no tanks and no woods nor forests.

Govindonogor was the favourite country residence of Raja Ramnath of Dinajpoor, and he had there a handsome house surrounded by a mud fort, and by religious buildings. The whole is very ruinous. The best dwelling now in the district belongs to a person, who has purchased some lands, and re-

sides at Govindonogor. It has one or two small brick apartments, but is not fit for a person of any rank. The whole habitations are huts, and none almost have mud walls, although many are neatly plastered with that material.

The only place of worship in the district, of any considerable size, is the temple of Govindo (Vishnu), near the late Raja Ramnath's house; but it is neither large, handsome, nor considered as holy. The most extraordinary thing near it are some artificial caves, built of brick round the roots of two large trees, and covered with earth. In these wretched hovels resided a number of persons (Vaishnovs) of both sexes, who were dedicated to God, and received a daily subsistence from the Raja. These caves are about 6 feet long, and 3 wide and high, and no air nor light enters but at the end most remote from the tree, which is open. The market places are twenty, of which three are small marts for exportation and importation, and three others have a few shops and houses; but most of the produce that is exported goes by the way of Raygunj. Goyora, the largest place in the division, contains between 70 and 80 houses, and Govindonogor, the only other place that has any pretensions to be called a town, contains about 60 dwellings, most of which, however, are rather comfortable, and neatly plastered with clay.

Rani Songkol.—Is situated immediately south from Thakurgram, on the banks of the Nagor, and is nearly of the same nature with the western part of that district. The division is nearly of a square form, about 15 miles from north to south, and as much from east to west, and may contain about 210 square miles. The whole almost is of a fine sandy soil. About 10 miles may be destroyed by rivers and marshes; 16 miles may be sterile lands, burying-grounds, roads, market places, or temples; 26 miles of high land are much neglected, either from the cultivators having run away, or only choosing to cultivate it occasionally; 50 miles may be high land fully occupied, and cultivated; and 105 may be rich low land, of which none is allowed to be waste. There is no forest in this district; but the houses are well sheltered by fruit trees and bamboos.

Two families of Zemindars, Kholora and Maldwar, who have possessed estates for some time, have brick houses

suitable to their rank, and built after the Anglo-Indian style of architecture. A few houses have mud walls, and perhaps one-eighth of the whole huts are plastered neatly with clay. The remainder are mere hovels with mud walls made of straw or grass hurdles. The principal place of Hindu worship is Gorokhyonath, where there is a small temple of Sib, and another of Kali; but the principal holiness of the place is owing to a small spring or well, which is about two feet each way, and is surrounded by stone. It is supposed, that no multitude, however great, could empty this well. The temple has a small endowment of land, and 10 or 12,000 persons assemble here, on the festival of the god (Siboratri), to drink the water, and perform other ceremonies. The chief Muhammedan place of worship also owes more of its celebrity to the sanctity of the place than to its magnificence; for it is only a large thatched hut; but it contains the remains of Saiud Nekmurdun, a person of the greatest holiness. His festival is celebrated at a great annual fair, that will hereafter be mentioned.

The market places in this division are seventeen, of which by far the most considerable is the great fair at Bhowanipoor on the festival of Nekmurdun. It continues for ten days from about the 7th to the 17th of April. A military guard and civil officers (often the magistrate) attend to preserve peace, and protect the innocent; for the multitude is very great, and rogues, thieves, musicians, jugglers, showmen, and religious mendicants, as usual on such occasions, form a considerable part of the multitude; idle lookers on, and religious persons come to honour the saint increase the multitude, which is filled up by traders from Bhotan, Puraniya, Nepal, Benares, Patna, Moorshedabad, Rongpoor, and all intermediate places. About 3000 ponies, partly from Bhotan, and partly from the west country, and from 1 to 2000 carriage oxen are usually sold at this fair; and there is exposed for sale almost every kind of commodity, for which there is any demand in the country, especially of a more valuable sort, such as broad-cloth, silks, fine muslins, shawls, copper, hardware, trinkets, spices, musk, Thibet cows' tails, and gold dust. It is said, that the sales amount to between 3 and 400,000 rs. and that 100,000 people usually attend.

There are two marts for exportation and importation, and

four other places where there are a few shops; but most of the produce that is exported, is sent by the way of Raygunj. The other markets are held in the fields. Songkol, the only place entitled in any degree to be called a town, contains about 150 dwellings, none of them in the least remarkable.

PIRGUNJ—Lies on both sides of the Tanggon, south from Thakurgram, east from Rani Songkol, and west from Birgunj. It contains about 220 square miles, and is of an oblong form, 20 miles from north to south, and 14 from east to west. The whole is a light sandy soil, so that no iron is required in the plough; about 138 miles are fully occupied; about 13 miles are occupied by rivers and marshes, 7 miles are destroyed by inundation, and are quite waste; 14 miles may be occupied by woods, of which some consist almost entirely of Sal (Shorea robusta); 20 miles by poor high land, fit for very little, and chiefly producing bamboos and wretched pasture, and include burying-grounds, roads, and market-places; 28 miles are high land, little occupied, and either altogether deserted, or only cultivated occasionally, but a considerable portion is poor, and fit only for being cultivated after a fallow. In this division there are few tanks, nor does it contain one dwelling-house built of brick. The huts are well sheltered with trees and bamboos, and are almost entirely constructed of straw hurdles.

There is no place of worship that receives any dignity from its ornaments or buildings, but many persons frequent the tombs of three Muhammedan saints (Pirs.) There is no remarkable public work. On the west bank of the Tanggon, near the southern extremity of the district, are some ruins, which consist of bricks, in some places thickly scattered in the ground, in others rising into heaps. On the largest of these is a carved stone. The ruins extend about 200 yards along the steep bank of the river, which is said to have carried away a great part. Many bricks have also been removed, in order to build small temples; and deep excavations have been made, probably in order to discover treasure. This place is called the fort of Mohadev, who is supposed by the people to have been contemporary with Virat Raja. At a little distance farther west is another ruin, containing bricks, which I did not see. It is called Mogulan Kot, and is said to have been the residence of a Moslem chief, and his daughter, who are

also supposed to have been contemporary with Virat Raja, the people having not the smallest idea of chronology. The agent of the proprietor, a Brahman of Maldeh, who told me this, had so little curiosity that he could not tell whether or not there was any inscription over the door of a small temple which was built from the ruins, and in which he daily performed worship.

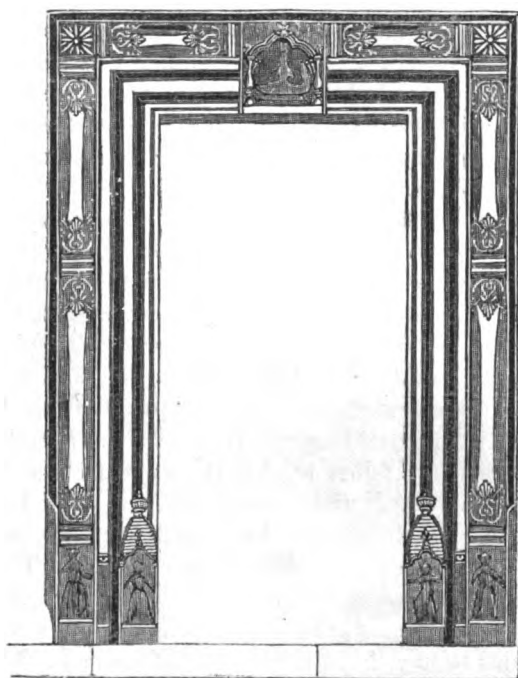
There are eleven market places, of which two are small marts for exportation and importation; but most of the produce of the country that is exported, goes to Raygunj, and a part to Maldeh and its vicinity. Besides the two marts, or Bundurs, four of the market places have some shops. The only place which can be considered as a town, is Kornayi, on the Tanggon, which contains about 100 dwellings, and has three small brick temples, which were built by a person who has lately purchased an estate in the neighbourhood.

Hemtabad—Is situated south from Rani Songkol, on the east side of the Nagor, and is divided into nearly two equal portions by the Kulik. It is about 20 miles from north to south, and as much from east to west, and contains about 300 square miles. The soil is almost entirely loose, and contains too much sand. A great deal of it is too high for retaining water, and is therefore barren; and a great deal is so low, as to be rendered useless by floods. About 187 miles are fully cultivated; 37 miles are destroyed by marshes, rivers, floods, and water, of which 20 are only occasionally inundated; 38 are unfit for cultivation, being very poor, or occupied by burial grounds, market places, roads, &c.; and 38 are high grounds, either deserted or only cultivated occasionally. Two marshes (Bils) retain much water during the whole year, and form lakes. The huts are well sheltered by trees and bamboos, and the only woods are the trees and bushes growing near the houses that have been deserted, and which may perhaps occupy eight miles of the land mentioned under that head. There are few tanks in the division, and none of remarkable size. There is no dwelling constructed of brick, except one belonging to a mosque. No dwelling has mud walls; but many have walls of straw, plastered with clay. Few walls are constructed of mats; hurdles are the usual material.

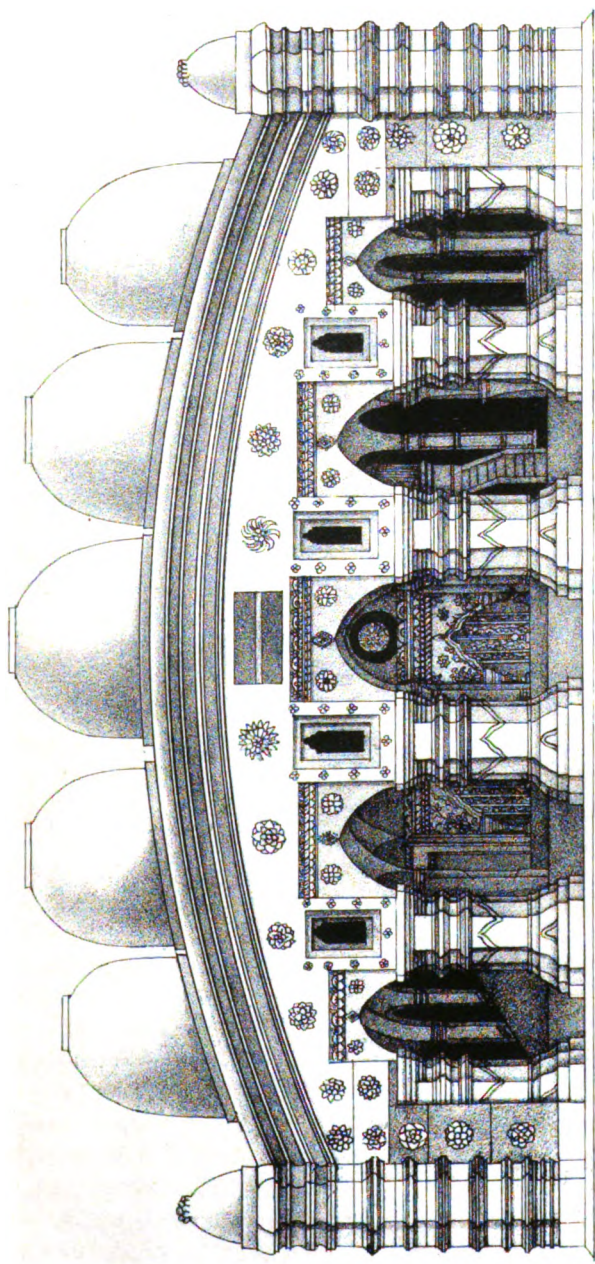
The antiquities of this district are rather interesting, and are situated immediately west from Hemtabad. It is said that

formerly there governed at this place a Hindu Raja named Mohes, to whom much of the neighbouring country was subject. During his government a certain Muhammedan saint (Pir), named Buzerudin, came and sat down at this prince's gate, where he seems to have been but coldly received. Soon after came a still more celebrated person Mukhdum Ghuribal Hoseyn Dokorposh, and the Raja immediately fled to Dhaka, which he is said to have founded. The Pir, I should suppose, was accompanied by an army; but tradition by no means supports this conjecture. On the contrary it is said, that the Raja fled merely because he was shocked at the destruction, which the two barbarian saints and their attendants, committed on innocent cattle and poultry. Mohes therefore was probably very different from the Hindu Rajas of the present day, as indeed all Rajas of former times are said to have been. A Muhammedan saint in these days, who attempted to kill a cow in a Hindu country, would run great risk, unless he was protected by an army. In support of my conjecture however I must mention, that soon after Mohes had been expelled by the saints, Sultan Hoseyn appears to have been at the place, and gave his daughter in marriage to Mukdum Uzi-udin, brother to Dokorposh. The son by this marriage, Mukhdum Shah Bazit, is said to have retired to Sondwip, and took up his abode there; but his son Jamaludin, returned here, and was buried near his grand uncle. In the inscription on his tomb, it must be observed, that he is called Jamaludin, son of Sheykh Yahia. On the whole, I am inclined to believe, that Mohes Raja was sovereign of this part of the country, which, not being included in the provinces of Barondro, or Maithilo, did not probably belong to the kingdom of Gaur, until the time of Hoseyn, the conqueror of Kamrup and Orissa; and this territory may have been the country called Kamchah, which he added to his dominions. Having premised so much on the history of the place, I shall now describe its present appearance.

Near a tank, a little way west from Hemtabad, there is a space of ground about half a mile in diameter, over every part of which bricks are thickly scattered, and in some places the foundations of walls may be traced. In some places this is thickly covered with trees and bushes, and in others it is clear. At the northern end is a small hill formed of bricks,

and said to have been the public office (Kuchary) of Mohes Raja. On the surface are a good many large squared stones, of which material probably a considerable part of the building consisted. South from that, about 100 yards, is a still larger heap of ruins, and here also are several stones, one of which, apparently the lintel of a door, is a good deal ornamented. This ruin is said to have been the Raja's house. Immediately south from this heap are shown the foundations of a small square apartment, made of brick, in the centre of which is a tomb, said to be that of Pir Buzerudin. The door of stone is still erect, and, as will appear from the wood cut

has been handsome. From the figures on it, the workmanship is no doubt Hindu, and in all probability it has been a door in the Raja's house. At the south end of the ruins are the mosques, and adjacent buildings, which I have no doubt have also been built from the materials of the Raja's abode. A door in the outer wall has still more perfect figures than that which has been drawn, and the figure on the lintel

strongly resembles the image of Gautama, and his two favourite disciples, as usually represented in the temples of Ava. The pillars in the mosque are remarkably clumsy, quite in the Hindu style; and being all of different forms and lengths, could not have been originally intended for the places which they now occupy. Besides, on a stone lying near the mosque is carved a human figure, quite entire. I have given a drawing of this building (*Plate 2*), as being one of the most entire in the district.

About a mile and a half beyond this ruin is another, which has been surrounded by a brick wall, and is usually called the Tukht or throne of Hoseyn (Padshah) the king. The Tukht consists of a quadrangular truncated pyramid of about 20 feet in perpendicular height, and is composed of bricks heaped confusedly together. Intermixed with these are some large carved stones, evidently of the same style as those of Mohes Raja's house; but whether they have been brought from thence, or whether they are the ruins of a temple, that formerly may have been on the spot, I cannot say. On the summit of this pyramid is a considerable square area, in the centre of which a terrace has been raised about three feet high, and this has been built with cement, and its sides have been ornamented with mouldings covered with plaster. It was here, it is said, that Hoseyn Shah sat, and beheld the sports that were exhibited at the nuptials of his daughter. South from the pyramid are the ruins of a brick building, the roof of which has fallen in, but the walls are standing, and have been encrusted with carved bricks. The building is nearly square, with arched doors and windows, and is elevated on a brick terrace, about five feet high. This is said to have been the house that was erected for the accommodation of the princess during the ceremony, after which the whole seems to have been given to religious men. The tombs of two saints (Welaet and Bahador Shahs) now occupy the throne of the king, and many tombs of saints and fakirs surround the pyramid. There is a small endowment of land for supporting the fakir, who supplies the lamps burned at the tombs of the most distinguished of these personages. Between the two ruins many bricks are scattered on the fields, and a very wide road, with a ditch on each side, may be traced most part of the way.

MOSQUE NEAR HEMTABAD.

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J. Netherclift Lithog.

In this division there are 16 market-places, of which Raygunj is the only mart for exportation and importation, and it is indeed the most considerable mart in Dinajpoor, and one of its principal towns. It is quite a new place, that has arisen within these 30 years. This is the mart, from whence the produce of Thakurgram, Pirgunj, Songkol, Hemtabad, and part of Kaliyagunj, is chiefly exported; and a great part of the produce of the north-west part of Rongpoor comes also this way. It is in fact the principal mart in a rich country, which extends about 70 miles in length and 20 in breadth, and it is almost the only place in that extent that deserves to be called a town, yet the usual computation makes its inhabitants occupy only 400 houses; and on a minute inquiry at the place, I could not learn that it contained more than 273 dwellings (Varis), and probably about 700 huts, for it does not contain any building worthy to be called a house. The merchants have large yards, surrounded by rails of split bamboos, about eight feet high. Within these are many huts and storehouses, with walls constructed of straw hurdles, and very few have the walls plastered with clay, or formed of mats. The streets are narrow, dirty, and confused; but it is a place of great stir, and crowded with boatmen and drivers of cattle. The people allege, that on an average, for eight months in the year, 5000 loaded oxen arrive each day, which is probably an exaggeration, although I saw nothing to contradict its accuracy. Two other places are provided with shops, and one of these, Tajpoor, is rather a large place, as it contains 100 dwellings. The part of this town, which is on the west side of the river, and which Major Rennell has laid down as Tajpoor, is by the natives called Bhogoleta. On the east side there is no remain of brick houses, nor of its ever having been a place of consequence, although one of the sirkars, into which Bengal was divided by Akber, derives its name from the place.

Kaliyagunj—is about 40 miles in length from south-south-west, to north-north-east, and about 14 miles from west-north-west, to east-south-east, but contains only about 310 square miles. About 40 miles of this division are subject to inundation; but this portion is much better cultivated than such lands usually are in this district, and probably 25 miles of these are occupied; of the remainder probably 160 miles,

towards Hemtabad and Pirgunj, are of a loose sandy soil much neglected, and rather poor; and 95 miles, towards Bongsihari, are of a stiff clay very fully occupied. I should suppose, that the whole land occupied may be 215 miles; 30 miles are deserted villages and lands, 10 of which are overgrown with trees and bamboos; 10 miles are occupied by poor waste soil, burial grounds, market places, and the like; and 15 are occupied by rivers, tanks, water-courses and marshes, which are not cultivated; for a considerable part of the marshes in this division produce the kind of rice called Boro. There are no remarkable tanks.

The huts, except in the inundated parts, are well sheltered with trees and bamboos. Much of the waste land is overgrown with reeds. Two families of the proprietors have brick houses, which are becoming their rank and fortune; and one of them belonging to Guruprosad of Sorur, is a place very much becoming the residence of a gentleman. It is situated in a large piece of ground finely wooded, and has been surrounded with a ditch and rampart of earth, now considered as unnecessary, and allowed to go to ruin. The family of the present proprietor has enjoyed the estate for some time, and he seems very worthy of his fortune; as very unlike most of the proprietors of land in Bengal he attends carefully to his affairs, and has the manners of a gentleman. Another proprietor of land and the acting Kazi, have decent thatched habitations. All the others are huts; but towards the east side of the district these are more comfortable, as they have mud walls.

I heard of no Hindu place of worship deserving notice. The Muhammedans are not more fortunate; for although the acting Kazi has lately built a neat, though small mosque, but little reverence is shown for it, the monuments of holy men in this district being the favorite places of worship.

In this division are 19 market-places. The only mart is Churamon, a tolerable town, which contains at least 300 dwellings, much larger, better built and cleaner then Raygunj; but a place of infinitely less commerce. Three other small places have a few shops. The other market-places are in the fields. The exports from the district are chiefly made through Raygunj and Maldeh.

Bongsihari—contains about 240 square miles, and is about

24 miles from south-south-west to north-north-east by 11 miles from east-south-east to west-north-west. Little of this division is subject to inundation, but almost the whole consists of hard clay, which in most places is level, and in some so flat, that the inhabitants have dug tanks, in order to procure situations for their houses. In others, there is a large extent of uneven land rather barren. I should suppose, that 180 miles are fully occupied; 16 are occupied by high barren land, burial-grounds, market-places, &c. More is really high and barren, but a great deal of this is occupied by houses and gardens: 30 miles are poor or deserted lands, cultivated occasionally; and 15 are spoiled by tanks, rivers, and inundations. This portion also is in reality more extensive, but the banks of most of the tanks are occupied by houses. There are no woods, unless the trees growing about a few deserted villages may be considered as such. The waste inundated land is covered with long reeds. There is no dwelling-house built of brick, but almost all the huts have mud walls, and many of their yards are surrounded by fences of the same material. Within the premises, many of the more wealthy farmers have small brick mosques, that are well white-washed, and add much to the good appearance of the country.

In this division there is no place of worship of any note; but near the Thanah there are several antiquities. At about half-a-mile south from this place is a small Hindu temple called a mandir, a work apparently of considerable antiquity. Its base is a quadrangular prism, about 20 feet high and 12 wide. Its summit is a pyramid of about the same height. This part of the building has been much ornamented with carved bricks, especially a kind of escutcheon on each face, that possesses some degree of good taste. The artists have been ignorant of the method of constructing an arch; for the door is contracted above to a point, by the horizontal rows of bricks gradually encroaching on its width. Not the smallest tradition remains concerning its founder, and the image has been removed.

At a little distance west from this mandir begins a narrow elevated ridge of land, perhaps half-a-mile wide, which extends west to the Beliya about two miles, and seems to me entirely artificial. It is everywhere full of small tanks, inequalities

and heaps, many of which consist almost entirely of bricks. The largest of these has been lately opened, probably in part to look for hidden treasure, and in part to procure bricks for building an office (Kuchary) for collecting the rents, and this later view has not been in vain. The building has probably been a temple in form of a polygon. The outer wall is about four feet thick. At the western end of this elevated space are two tanks of considerable dimensions, which are almost filled up, and entirely choked with weeds. The place is called Brojobollobhopoor, and I have no doubt has been a considerable town; but there is no tradition of such having been the case.

About 1¼ mile west from the Baliya is a very large tank called Melan-Dighi, which is nearly choked with weeds. The only tradition concerning it is, that it was dug by a princess (Rani), and that a miracle was necessary to procure water. About 1¼ mile further west is Gor Dighi a tank, the water of which has extended about 600 yards north and south, and 400 yards east and west, and which of course is a Hindu work. A considerable portion of it has now so far filled up, that it is cultivated for rice. About 1,200 yards west from this tank is another called Alta Dighi, which extends nearly to the same dimensions, but is placed with its greatest length from east to west, and therefore is a Muhammedan work. Between these two tanks are the ruins of Borohata, which are very large heaps or mounds, that consist in a great measure of bricks. In many places the foundations of walls may be traced, and even the dimensions of the chambers. All these chambers are of a small size, owing to which they may have resisted the attacks of time better, than more spacious apartments. They are chiefly situated in the southern division of the town called Kutivari.

In this part are some small tanks, that have evidently been entirely lined with brick. In the centre of the ruins are indubitable traces of a small square fort, which has been surrounded by a double wall of brick, and an intermediate ditch. The ruin to the north of this fort is almost entirely without the trace of regular form; but the quantity of bricks, which it contains, is great. At its northern extremity is the monument of a Muhammedan saint, Pir Budul Diwan, which is built of brick. In its gate are two stones, but there is

nothing about them to determine, whether they have been brought by the founders, or taken from the ruins. There is no sort of tradition concerning the persons who either founded or destroyed these works.

I observed also in this division, on the road towards the south-east, two places where there were small tanks, and heaps of earth and bricks, which may have been towns; but there was nothing about them which indicated their ever having been places of considerable importance. In the north-east part of this division is a very large tank, supposed to have been dug by Mohipal Raja, and called after his name (Moybuldiggy R.) The sheet of water extends 3800 feet from north to south, and 1100 from east to west. Its depth must be very considerable, as the banks are very large. On the bank are several small places of worship, both Hindu and Moslem, but none of any consequence. Nothing remains to shew, that Mohipal ever resided either at the tank, or at Mohipoor near it; but there is a vast number of bricks and some stones, that probably belonged to religious buildings, that have been erected by the person who constructed the tank. One of the stones is evidently the lintel of a door, and of the same style with those at Ban Nogor, and may have been brought from the ruins of that city. The people in the neighbourhood have an idea, that there has been a building in the centre of the tank; but this is probably devoid of truth, as there is no end to the idle stories which they relate concerning the tank and Mohipal. Both are considered as venerable, or rather awful, and the Raja is frequently invoked in times of danger. A canal and road, formed from the earth thrown out, leads south from the tank about four miles, where they join others leading east and west, but to what distance I did not ascertain.

There are in this division 20 market places, of which six are marts for exportation, but all of small importance; for a great part of the produce goes for exportation to Maldeh or its vicinity. One market place (Mukhdumpoor) besides is provided with several shops, and is rather a large place, for it contains 100 habitations; but the chief place is Horirampoor one of the marts, which with the adjoining town called Betona, contains 300 houses; and in this country is reckoned a considerable town.

Jogodol—is somewhat of a triangular form, with its shortest side to the north, measuring about 20 miles. From north to south it extends about 23 miles, and contains about 250 square miles. It is much intersected by rivers, that have very low banks, over which they extend far in the inundations, so that during the rainy season probably 62 miles are entirely covered, and of this not above 12 miles are cultivated for indigo, or for the rice called Boro. Except in the inundated lands the soil is a hard clay, but is not level; 15 miles are at all seasons occupied by rivers, water courses, tanks, and marshes, and are unfit for cultivation; 19 miles are high useless land, either covered with long harsh grass or bushes, or are occupied by burial grounds, market places, roads, and other purposes, which render them totally unfit for being rented; 44 miles are deserted villages, which are capable of cultivation, and 22 of these are overgrown with woods, from the trees that formerly surrounded the houses; and 110 miles are fully occupied. The most remarkable tanks are Dhormo Sagor, near Rajnogor, and two at Chaknogor which have the title of Pushkorni; but none of them are of great dimensions, nor are of singular holiness.

In this district there are five or six houses of brick, which belong to the landholders. Most of the farmers live in huts with mud walls; but the traders, who live in towns or villages, as if on purpose to encourage fire, usually build their houses with hurdles. This is pretty universally the case throughout the district. The reason assigned is, that their stay in one place is so precarious, that it would be absurd to incur the expense of building a substantial house. There is no Hindu place of worship remarkable either for its architecture, or sanctity. Many Muhammedans resort to the monument of a saint, about a coss east from the Thanah, which is the only place of worship at all remarkable that they possess. The building is of little consequence. There are considerable remains of antiquity; but the death of the Darogah, just before my arrival, and the ignorance of the people about the Thanah, prevented me from hearing of them in time; so that I was unable to lay down a plan for visiting them. The north-east corner of the ruins of Peruya, or rather of its dependencies, extend into this division, and in that direction I observed several heaps of broken bricks. Sekundur Shah

had a favourite residence on the banks of the Tanggon, about eight or nine miles south from Bamongola. The ruins are said to be very extensive, and to contain many bricks and stones.

Hoseyn Shah formed a fine road through the country between the Tanggon and Punabhoba, and it is said to have extended to Ghoraghat; but I have not been able to trace it. The width is said to have been 348 cubits, with a large ditch and many fine trees on each side, and bridges constructed of bricks. The whole is overgrown, and gone to ruin. From these dimensions it must rather have been a work of ostentation than utility, and probably was rather an appendage to the country residence of the kings at Sekundura, than a military way to Ghoraghat. Near the centre of the island, formed by the Tanggon and Punabhoba, is a tank surrounded by a large wood, in which there are many heaps of bricks and stones, said to be the ruins of the abode of Moyu Rudro, a prince of the family of the Sun; but nothing is known concerning the time when he governed. At Ghatnogor, however, I heard of the same personage, and it is said, that he was contemporary with Virat. In this division there are 16 market places, of which six are marts, where goods are exported and imported; but these are rather inconsiderable places. One market place besides is provided with a few shops.

MALDEH.—The division under the Thanah of Maldeh extends from the Punabhoba along the Mohanonda and Nagor for above 30 miles, and in some places is 10 miles in width. It contains about 280 square miles. The Darogah resides at Maldeh, exactly on the frontier of Puraniya, but nearly in the middle of his district with respect to length, and no other place would be a more convenient residence. The inundated land in this division is of great extent and may occupy 70 square miles, of which perhaps 20 are cultivated with Boro rice, or are (Chora) of a sandy soil near the banks of rivers, and occasionally produce indigo, cucurbitaceous plants, wheat, or barley. The remainder is overgrown with long reeds. The remaining 210 miles are clay, with a very uneven surface, and some mixture of sand, so that perhaps 40 miles may be reckoned of a mixed soil, of which perhaps 15 are occupied; 17 miles may be occupied by tanks, rivers,

and marshes, or water courses; 18 miles by poor steep unimprovable soil, or by burial places, roads, markets, and the like; 35 miles are occupied by forests, which formerly were towns and gardens; 35 miles by lands, that have been, and occasionally are cultivated after a fallow, but which are of a soil perfectly good for regular cultivation; and 105 are fully occupied, of which perhaps 15 are of a rich free soil.

The huts in this division are remarkably well shaded with trees, especially on the banks of the Mohanonda, which are peculiarly favourable for the mango and Banyan tree. The latter indeed surpasses in grandeur and beauty anything of the kind that I have ever seen; and hence, perhaps, Linnæus might have been justified in calling it the Ficus Bengalensis, as flourishing peculiarly near the ancient capital of that country, had not the denomination of Ficus Indica been consecrated by its use in the writers of antiquity. A great many houses in this division are constructed with brick, and contain stones as thresholds and stairs; more, I imagine, from the ruins affording a superabundance of these materals at no expense, and little trouble, than from its manufactures and commerce having introduced an extraordinary wealth, or an improved manner of living. This in fact is by far the poorest, and worst cultivated division in the district.

The only Hindu place of worship that deserves notice, is a small pond (Kundo), to which on a certain day the women of the vicinity resort to bathe. It is chiefly frequented by women who have lost their children, either by abortion or disease. If in bathing they find a living snail, they think that their future children will live; but if they find an empty shell, they think that it forebodes a continuance of their misfortune. The Muhammedan places of worship are of much more importance. In Maldeh are five mosques of some size, and in which worship is performed, although they are ruinous, and have no endowments. According to an inscription over the door of the largest, it was built 210 years ago (before 1802) by a merchant of the place. Part of it is of stone, evidently brought fom the ruins of Gaur.

By far the most conspicuous places of worship, however, are the monuments at Peruya, of Mukhdum Shah Jelal, and Kotub Shah, who were the two most distinguished religious persons during the early part of the kingly government of

Bengal. Numerous pilgrims repair to these monuments, at all seasons and from all parts of Bengal. That of Mukhdum is chiefly frequented at a very great annual assembly (Mela), while the memory of Kotub is celebrated at four smaller meetings (Ulos); but all religious mendicants (Fakirs), who come at any time are fed for three days, and this is called charity. Both places have considerable endowments, which are expended in keeping the buildings in repair, and in the support of these vagrants, and of a numerous establishment of servants, who form the population of Perua. The lands in this district which belong to the monument of Mukhdum, are called Baishazary, or twenty-two thousand, as containing that number of bigahs, and have always been managed by a person appointed by government. The lands belonging to the monument of Kotub Shah are under the management of his descendants, and are called Chhye hazary, as containing six thousand bigahs.

On going north from Maldeh, the monument of Mukhdum is the nearest, and the entrance to it is pointed out by a plain but not inelegant gate of stone and brick. At some distance within this is a village, containing about 100 huts, that are occupied by the servants. They are rather comfortable, and are surrounded by good gardens. Beyond these are some rude sheds, in which pilgrims and other vagrants find shelter. Beyond these is the monument, consisting of a small square area, the entrance into which is from the south-east corner, by a small door. On the right of the door is a small chamber, in which Kotub Shah performed his devotions. Beyond that is the kitchen. The north side of the area is a refectory for Fakirs. On the west side is a small plain mosque, without pillars or pulpit. The south side of the area is enclosed by a small tank, lined with stones towards the area, from which a stair descends to the bottom, that is very dirty, and the water is bad. The tomb of the saint is not here, and the buildings are neither large nor elegant. Although not neatly kept, they are in tolerable repair, and, from carving on the stones, they would evidently appear to have been brought from ruins, probably from Gaur. From three different inscriptions, it would appear that these buildings have been erected, improved, or repaired, by Shah Neyamut Ullah, in A. H. 1075, by Chaund Khan, A. H. 1084, and by Sadullah, A. H. 1093.

About a quarter of a mile beyond the monument of Mukh-

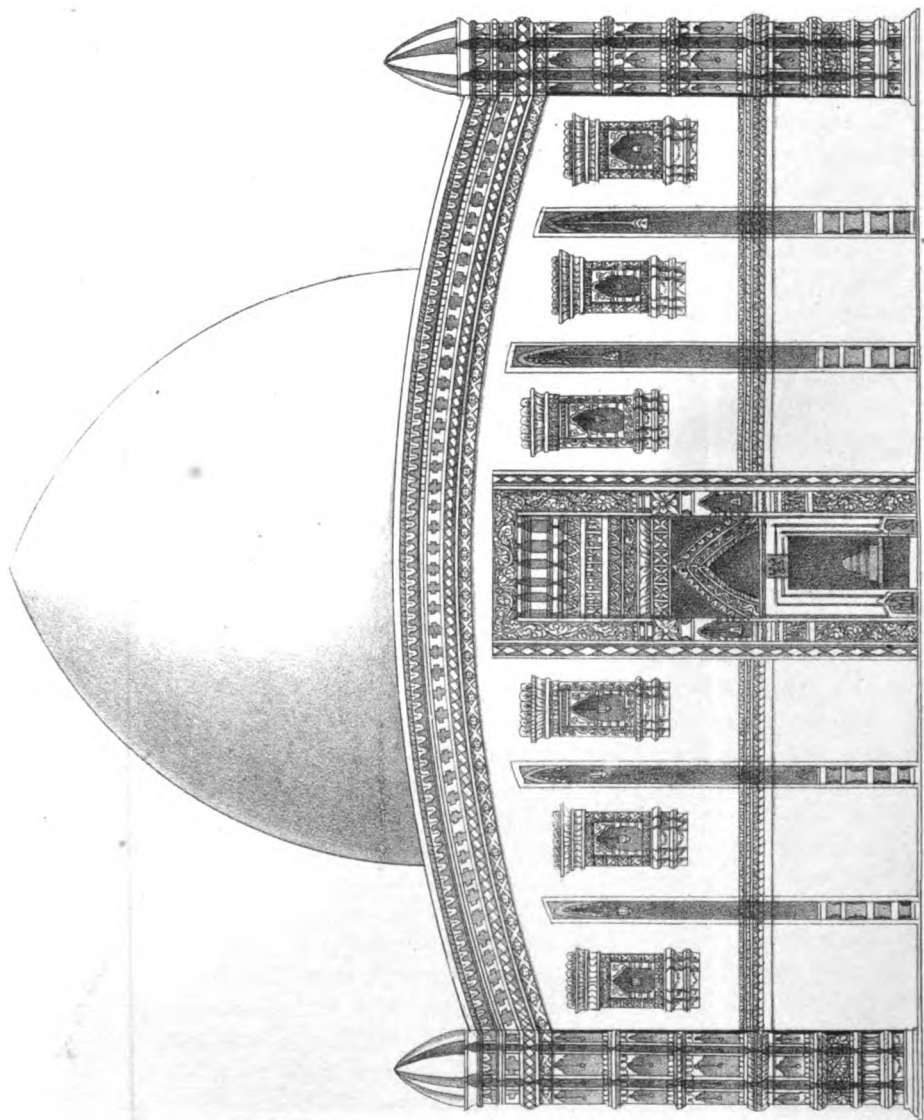
dum, is the village which belongs to the attendants on Kutub Saheb, who are fully as numerous as those of Mukhdum, and the sheds are capable of accommodating more strangers. These are placed on both sides of the road, but chiefly on the east; for the monument occupies a large space on the west. In the centre are the remains of Kotub's dwelling house, with a large gate in front. These buildings, which formed the dwelling of the saint, have been extensive, and included several courts; but they are very ruinous. The greater part, according to the natives, is buried in the forest, and inaccessible. The gateway and two outer courts, are still in part occupied by travellers, and by the kitchens, where food is prepared for the mendicants; but they are ruinous, and slovenly to the last degree. Beyond these I penetrated into what are said to have been the women's apartments, one of which has been a small square chamber, lined with tiles that have been enamelled with various glaring colours. The gateway is by far the most entire part, owing probably to its sanctity; for Mukhdum Dokorposh having come here, one day, very hungry, and having gone into the kitchen, could procure nothing to eat, and therefore became very angry, and struck the gate with both hands and feet, leaving the impressions of both on the solid granite. These miraculous marks are considered as holy, and not fit to be trodden on, by which means indeed I discovered them; for to say the truth, they have not the most distant resemblance to the impressions of the human hand or foot. This however is a trifle to the sturdy faith of a pilgrim, who is seldom very critical. Over the gate is an inscription, containing a passage from the Koran. South from the house or palace of Kotub, is an irregular square space, of about 100 yards in diameter, enclosed with a brick wall. The principal entrance is from the east, through a gateway of considerable dimensions. The middle space is occupied by a square tank, lined with cut stone. The north-west corner is occupied by a small ruinous mosque, without columns or pulpit. The south-west corner is occupied by the tomb of Kotub, which I saw only from a distance, as my near approach would have given offence. It is covered with a canopy of white cotton cloth, and cloth of the same kind is laid over the grave. Near it are two small buildings of brick, on one of which is an inscription bearing date A. H. 886. Between it and the tank is the tomb

of Alal Huk, father of Kotub, and also a saint of great celebrity. It is covered in the same manner as the tomb of his son. A great part of the remainder of the area is filled by the tombs of Moslems that wished to be buried near these illustrious personages, who by the people here are said to have been the real kings of the place, as it was only according to their pleasure that the temporal kings could reign; and I am inclined to think, that there is some truth in the assertion. In fact, the ruins of Kotub's house or palace, are nearly as respectable as those which are said to be the remains of the royal palace. Among the tombs is a very neat one in good preservation, which, from an inscription on it, appears to be that of the infant son of Enact Ullah, son of Taher Muhammed, son of Imadudin Hoseyn, son of Sultan Ali Subzoari, A. H. 1017.

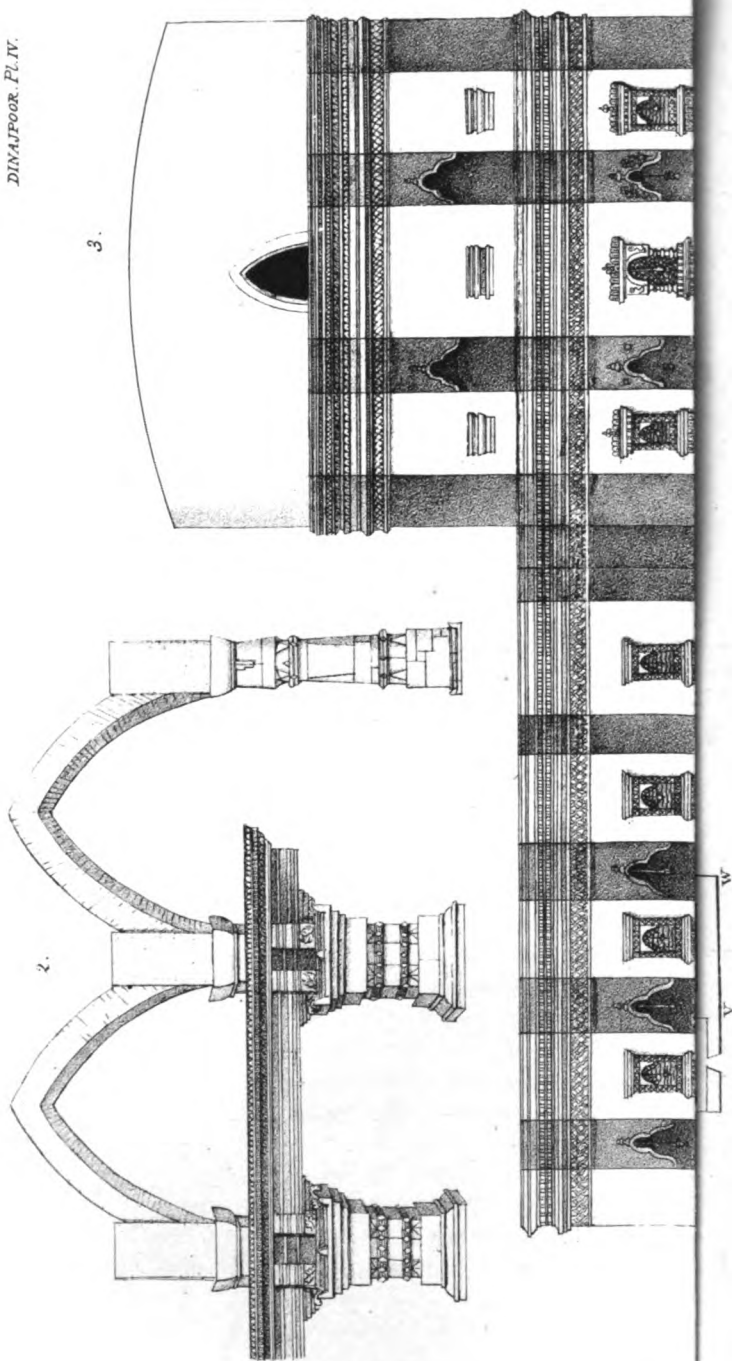
On the north side of the saint's abode is a small mosque, called the golden, owing, I suppose, to its sanctity; for neither its materials nor architecture can entitle it to so high an appellation. It is surrounded by a brick wall, in the east side of which is a large gate, which is faced with cut granite, and contains an inscription. The walls of the mosque are also of granite, but the roof, which consists of ten miserable domes, made of brick, as the artists probably could not construct them of granite. The domes are supported by four columns and ten pilasters, all of different lengths and forms, and all equally destitute of elegance. In each end are two windows, and in the front five doors, all arched. Over the centre door is an inscription. The pulpit (Mumbir) is of stone, and very rude. The whole is hastening to ruin; for no pains are taken to remove the Pipol and banyan trees, that have sprung from crevices. From the inscriptions it would appear, that both the mosque and its gate were erected in honour of Kotub Saheb, by Mukhdum Sheykh, son of Muhammed Khalidi, in A. H. 993. There can be little doubt, from appearances of broken columns, and other carved stones irregularly placed, that the whole of the stones in these buildings have been brought from Gaur, or some other Hindu city.

I shall now describe the remaining antiquities of Peruya, Handuya, or Pandoviya, which being unconnected with the two great saints, are not objects of religious veneration, although some of them have been places of worship. A road paved with brick, from 12 to 15 feet wide, and not very straight,

seems to have passed through the whole length of the town, and from about ½ mile south from Mukhdum Saheb's gate, may extend five or six miles to the north. From heaps of bricks on both sides of this, it would appear to have been a regular street, with brick houses on each side, and the foundations of many of the buildings may be still traced. The monuments of the two saints, the large mosque of Adinah, and the monument of Sultan Ghyashudin, are on its sides, and near the centre is a bridge of three arches, partly built of stone, which has been thrown over a rivulet. It is of no great size, and very rudely formed, of materials evidently taken from Hindu ruins, as they contain figures in rude imitation of the human and animal form. At the northern end of the street are evident traces of a rampart, and the passage through it is called the gate of the fortress (Ghordwar). At the south end are many foundations, which cross each other and the road, and which have also probably belonged to a gate, but the forest is there so impenetrable, that the wall could not be traced. To the south of this are many scattered bricks, and beyond that is a rampart, probably an outwork, as the street cannot be traced farther than the foundations just now mentioned.

Near the street, and amidst the heaps of bricks, are many small tanks; and I am inclined to think, that in general the town extended only a very little way, either east or west, from the principal street. It is said, indeed, by the natives, that two miles east from Kotub Saheb's monument there is a large tank, dug by a Pherat Khan, and another a little north from that, called after Nasser Shah, and that so far traces of buildings may be discovered. Towards the west, they say, the traces extend but a little way, and the wood is so difficult to penetrate, that I was contented with visiting the ruins of the king's palace, which is about a mile east from the main street, and I found that there are no traces remaining to show that the town extended half so far. At the same time, it must be observed, that there seem to have been many large suburbs, which extended from the immediate vicinity of the town of Maldeh, towards the east and north, for at least 12 miles. Next to Maldeh was Siyapoor, then Fatehpoor, then Mehemanpoor, then Dandigal, then Belevari partly, and Bahadurpoor, entirely in the district of Jogodol. In each of these

TOMB OF GHIASUDDIEN ZENULABEDUN AND WAHAJUNDUN, AT PARRUAH. (80 FEET SQUARE) BY VEYKUNT.

این قبرہای غیاث الدین و زین العابدین وهاج الدین

London 1838 W. H. Allen & Co. 7 Leadenhall St.

London. 1838. W. H. Allen & Co. 7 Leadenhall St.

J. Netherclift Lithog.

is a considerable extent excavated with small tanks, and containing heaps of bricks, and some stones.

Immediately north from the golden mosque, on the same side of the principal street, is another, called that of one hundred thousand (Eklaky), as having cost 100,000 rs. It is constructed chiefly of brick, but is the handsomest building in the place. It is a square of 80 feet front, with a small turret at each corner, and roofed by one dome. The walls, outwardly, have been ornamented with carved tiles, and the dome within has been neatly plastered, but the design of the whole is clumsy, as will appear from the drawings (*Plate* 3.) It is lighted by four small doors, one in each side, and within forms an octagon, having four miserable chambers in the sides between the doors. These wretched places were probably intended for the abodes of the Fakirs, who were to take care of lamps. They have no air nor light but what comes through the small aperture, by which they communicate with the central hall. This seems to have been intended as the mausoleum of three royal personages, whose tombs occupy the middle of the floor. There is no inscription to serve as a guide; but it is said, that the tombs are those of Sultans Ghyashuden, Zaynulabdin and Wahuzudin. The two latter were probably sons of the first, who was the third Muhammedan King of Bengal. The eastern door has evidently been taken from a Hindu ruin, as it contains representations of the human form.

About two miles beyond this monument of Ghyashudin is the tomb of his father Sekundur, forming part of a very large mosque called Adinah, which is by far the largest building of the place. Indeed, it is considered, by the people of the vicinity, as of almost miraculous grandeur. It is on the east side of the principal street, between that and a large tank, which is almost entirely choked with weeds and bushes, and has become very ruinous. Enough only remains to enable us to judge of what it has been, and to form a ground plan (*Plate* 4, No. 1), which will facilitate the comprehension of the following account.

It is a quadrangular building, consisting chiefly of cloisters (A B C D), placed round a court, or central area (H E F G), of the same form, and extends nearly 500 feet from north to south, and 300 from east to west. The principal entrance for

so large a building is very mean, and is a small arched door (*a*), in the middle of the east side. It seems to have had a wall on each side, that conducted to the tank. The whole east side of the building is 500 feet long and 38 feet wide, within the walls. It has been supported by two brick walls (A D H F), and two rows of stone pillars (*b d*, *c e*), dividing it into three longitudinal aisles, and each row contained 38 pillars, dividing it again into 127 squares, each of which was covered by a small dome. On each side of the door (*a*) are 19 transverse rows, containing three squares, and in each of the 35 transverse rows, towards the north, is a small window facing the tank. Each of the three rows nearest the south end open towards the tank, with an arched gate, which probably served as entrances for the populace. The 33 central rows of squares communicated with the area by an equal number of arched doors. The three transverse rows of arches at each communicated with the three longitudinal rows or aisles of the south and north sides of the building. In each end of this side of the building, towards the north and south, are three windows, opposite to the aisles.

The northern and southern aisles of the building were exactly of the same structure with the eastern, consisting of two rows of pillars between the outer and inner walls, and covered by three longitudinal rows of small domes. At each transverse row of domes there is a window towards the town, and an arched door towards the central area of the building; but these sides, being shorter, contained only 13 rows of domes each, or, altogether, 78 domes in the two sides.

These three sides are nearly alike, and, including the cornice, are about 20 feet high. Their inner fronts, towards the area, were divided by plain rude pilasters, which supported a broad tasteless cornice. The whole space almost between the pilasters was occupied by an arched door, and the general appearance was that of rude cloisters, with 33 arched doors on one side, and 13 on each of the two others. The outer front of these sides was more ornamented. Each window is placed in a portion of the wall, which projects about six inches, and serves as a kind of pilaster to support the cornice. The window itself is very small, and is secured by a very neat latice of carved tiles. It is surrounded by ornaments of carved tiles, disposed in form of an arch. The

spaces between the projections, which contain the windows, are also ornamented with carved tiles, disposed in arches. There are only two division walls in the whole, and these, as will appear from the plan, are placed irregularly.

The western side of the building is rather more conspicuous, and consists of a centre (I) and two wings. (K L M N, O P Q R). The centre is an apartment about 64 feet from east to west, 32 feet from north to south, and 62 feet from the floor to the centre of the arch, by which it was covered. Its eastern end seems to have been entirely open, and its western end quite shut. In this are two niches (Sejdagah), towards which those who prayed turned their faces (*f g*); and on one side of the largest was a pulpit (*h*, Mimbar) of stone, to which the priest ascended by a small ill-contrived stair. These niches and pulpit are much carved, and somewhat polished.

Each side of the central place of worship communicates with its contiguous wing by five arches; for each wing is supported by four longitudinal rows of pillars, each containing 17 pillars, in all 68 pillars, which together with the walls supported 90 domes. The southern wing being the most simple, I shall describe it first. It opens towards the area by 15 large arches, in the same manner as the other sides, and it communicates with the cloisters of the southern side by three arches. Its southern end contains five windows. It has no opening in its west side; but opposite to each arch is a niche, highly ornamented, and towards which people might turn their faces when they prayed.

The northern wing is exactly of the same plan, but contains only 16 niches on the ground for the places of the 1st. and 14th from the centre are occupied by two small doors (*k l*). Twenty-one of the pillars, in seven rows at some distance from the centre, are much thicker and shorter than the others, and support a platform of stone (*m*, *n*, *o*, *p*,) called the king's throne (Padshahka Tukht), and elevated about eight feet from the ground. It is about 40 feet wide and 80 feet long, and is probably the place where the king and royal family performed their worship, while the chief of religion performed his in the pulpit of the centre (*h*), and the populace prayed in the southern wing. Above the 11 outer columns of the platform are clumsy four sided abutments about 2½ feet high, from whence spring the archs, that sup-

port the domes, which are no higher above the platform than in other parts of the wing. Above the 10 central columns which support the platform, are 10 smaller and more elegant pillars, about six feet high, which also supported domes of the same height with the others. The wall adjacent to the platform contains four niches (*q*, *q*, *q*, *q*), and two doors (*r s*), that are minutely carved, and ornamented with passages of the koran. The doors lead from the chamber, in which Sekundur was buried; and through which only the access to the platform could have been.

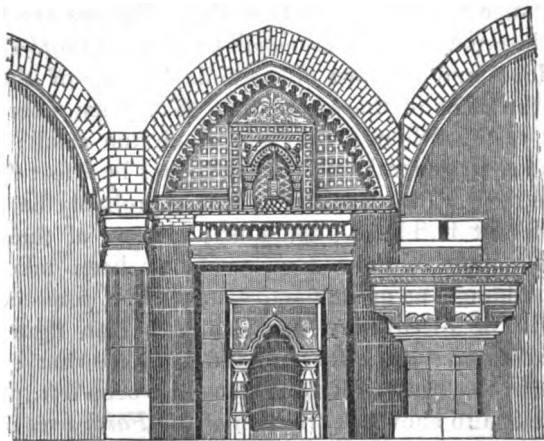
The form of the columns, both supporting the platform and roof, will be best judged of from the drawings (*Plate* 4, No. 2). The common columns are 2 feet wide at the base, and are 10 feet 4½ inches high, and some consist of one piece of granite, which is their principal merit. The arches, which spring from these pillars to support the domes are very clumsy, and ill-constructed. Their form is gothic, approaching however very near to circular, and they are constructed entirely of brick. Their centres are 16 feet 5½ inches from the floor, and the centres of the domes are 26 feet 7½ inches from the same. Behind this wing, as above-mentioned, is the apartment (S T V W), where Sekundur was buried. This building is of the same height with the wing, and the apartment within is 38 feet square, and has been covered by nine domes supported by four columns in the centre, and its floor is on a level with the royal platform, that is within the wing. The grave is in the centre, and is without ornament. It is composed of brick, and covered with an arch. Even here this unhappy prince, killed fighting against his son, and buried amidst the murder of 17 children, has not been allowed to remain undisturbed. The grave has been opened, probably in vain search for money, and it is now entirely empty. The western side of the apartment is fallen, but the southern contains three windows and the northern two, and a door, by which it communicated with another chamber or platform of the same size (S V X Y), and on the same level. There is no evidence to show that this ever had a roof; but on the west side it had a wall and door, to which probably the stair led, by which the royal family entered the place of worship. There was probably also a stair on the north side leading to a door (*l*), in the back of the northern wing.

The outer front of this west side, although quite irregular from the projection of the tomb, is the most entire part of the building, and has been the most ornamented. A kind of sketch (*Plate* 4, No. 3), of the west end of the centre building, and of part of the adjacent wing, and taken from the south west corner of Sekundur's tomb (west), will give some idea of the style. The centre building is about double the height of the wings. On its outer end, opposite to the great niche within, is a small one (*t*), over which is an inscription, that gives the date (A. H. 707) for the erection of the building by Sekundur.

The stone work, both in the centre and wings is only 11 feet high, and is quite plain. The brick work in the wings is 12 feet 5 inches high, and contains a double-broad cornice exceedingly carved, and sub-divided into minute portions, which would have been very costly to form in stone. Rude broad pilasters support both cornices, and in these, in the brick work, are little arches highly ornamented with carved tiles. In fact the natives use depressions in their walls, where we would use projections, so that their pilasters are broader than the intermediate spaces, as will be seen in (*Plate* 4, No. 3.)

The doors and windows of stone in this side of the building, are the parts of the whole, that have been executed in the best taste, although they are much too small; for the windows are in general only 5 feet 3 inches by 2 feet 6 inches. They are of very different styles, having probably been taken from different buildings; for I may observe of them in general, that most of them have evidently been taken from Hindu buildings, as on an narrow inspection some compartments will be discovered, from which human figures have been eradicated; yet a foot, a hand, or somewhat sufficient to ascertain the truth of what I state has been left, probably with a design to show the triumph of the *Faith* over idolatry. Over many of them in particular, is an escutcheon containing a figure sitting cross-legged. Some of these, I believe, represent Gones; but others having a small waist, cannot be intended for that divinity, and seem to me evidently to represent either Jain or Gautom. Great pains, however, has been taken to place every stone in an appropriate situation, and to conceal the Hindu carvings, where it was not intended, that these should enter into the plan of the Muhammedan archi-

tect; and I observed only one stone placed in the north-end of the north wing, that contained carving evidently misplaced; but the stair of the pulpit having fallen, discovers on the parts of its stones that had been concealed, much carving, among which are some fragments of the human figure.

The view of the western side of the building, from the area, must have been that of a small high centre with almost its whole end open, and two long low wings of cloisters, like those forming the other sides. On the parts of the carved work, executed by the Muhammedans, it may be observed, that they are too minute to produce any general great effect; and that, although from their size and general design, they might answer for the pattern of a curtain or sofa, yet they loose the effect of neatness, from their having been executed without care. Although carved on a stone, that admits easily of a marble polish, the cuttings are quite rough. The small niches, towards which the people turned when they prayed, are on the whole the best; as less frittered away by too great an anxiety after perfection. The drawing which

represents the niche (*u*) next to the royal platform, will give an idea of the style. The upper part is in plaster. The lower part is in stone, and shows the curious nature of the masonry.

There is no calcareous marble in the building. The rougher parts are granite, the more polished are indurated potstone impregnated with hornblende. Concerning the building in general it may be observed, that, although of great

size, it is so frittered away into small portions, that it has no grandeur; and although laboured with vast pains, its parts are so heavy, so ill proportioned, and so dark, that it totally wants elegance; and finally, that the badness of the masonry, the weakness of the pillars, and weight of the roof, rendered it of little stability.

About a mile east from Adinah is a ruin called the Satasghur, or sixty towers, and which is said to have been the palace of the king. On penetrating the woods, and reaching this place, I was much disappointed, as except the high name I could find nothing worthy of a royal residence. The remains consist of a tank about 120 yards in length, and 80 in breadth. The bank formed by throwing out the earth has been surrounded by a brick wall, in one place entire, and 16 feet high. This wall seems to have included many buildings, which, from the bulk of the ruins, seem to have been most considerable at the two ends. At the north-west corner is a small building, which contains an arched chamber in the centre, communicating with several smaller ones, by which it is surrounded. These communicate only with the central room, from whence there is a passage to an antichamber in front. Some appearance of pipes in the walls, and the general structure of the building, confirm the opinion of the natives, that this was a bath. The north end of the tank seems to have been lined, through the whole of its length, by a narrow gallery supported by arches, from whence stairs led down to the water; and within the gallery there appears to have been a row of small chambers; but these are now almost entirely choked with rubbish. At a little distance from the south-east corner of the tank, and without the wall is another ruin like that of the bath, and which probably served for the same purpose. A cylindrical cavity lined with brick, which descends from the top of the building to a considerable depth, and which is about 10 feet wide, served in all probability to give a supply of water. Very few stones have been employed in these buildings, and such as have been used are quite plain. Two large blocks of uncut grey granite are lying on the surface of the ruins. Some of the bricks are coated with green enamel.

About half way between Adinah and Satasghur is an earthen rampart with a ditch on its west side, which pro-

bably is part of a fortification, that may have surrounded the palace. The tank at Satasghur has its greatest length extending from north to south, and therefore has undoubtedly been the work of a Hindu; and in fact both Hindus and Muhammedans agree in attributing its construction to a Pandu Raja, who lived a long time ago, and communicated his name to the place. He is very remarkable as having been the father of Yudhisthir, who, according to legend, was sovereign of India in the commencement of this age, about 5000 years ago. The country then belonged to Virat, one of the adherents of the family of Pandu, and, according to tradition, this part of his dominions was under the immediate management of a certain Kichok, to whose sister Virat was married. It is possible, that during some rebellion, or disputed succession, Pandu may have been compelled to retire from Hostinapoor, and to take refuge in a friendly territory. Peruya, it must be observed, is a corrupt vulgar name, and the true appellation of the city is said to be Panduya, or Pandoviya.

In this division there are eleven market places, of which Maldeh is a large town, and Nawabgunj, Mongolvari, and Ayiyar are considerable marts for exportation and importation, and Shahpoor or Sahatpoor has some shops, with two weekly markets, where large quantities of silk are sold. Maldeh is said to be a Persian word, signifying the place of wealth, and the town of this name probably derived its origin from being the port of Peruya, during the time that that was the capital of Bengal, and became afterwards celebrated for its manufactures. It is now the second town in this district, and independent of Nawabgunj, which may be considered as a suburb occupied by boatmen and people employed in exporting goods, contains about 3000 houses, of which it is said one-eighth are built with brick and stones from the ruins of Gaur. One house contains three stories, and about 370 have two stories. Each of these has at least six apartments, which however are in general very small, especially those of the upper story, that serve for bed-rooms. About 750 brick houses of one story have several apartments; and the remainder, occupied in general by weavers and other artists, consist of one room about seven cubits long by five wide, and which has one small aperture, that serves for

door, window, and chimney. At each end is usually a thatched shed. The whole are mean and slovenly, built without lime, or at least only coated with plaster. Folding hinges for the doors and windows are just beginning to be introduced. These are an innovation from Europe; hooks were formerly in use. The town is miserably huddled together, along the side of the Mohanonda, on a narrow space, that seems to have been raised with the earth taken from three large hollows, into which the river penetrates in the rainy season, and then indeed the town is in a great measure insulated. Owing to this probably the streets are remarkably narrow, seldom exceeding six feet, and they are very uneven. The improvements made in Europe on the arts of weaving and dying, having occasioned a great diminution in the demands on this country, the people here have had less employment than usual, and many of the principal houses have failed and become ruinous, among which are the French and Dutch factories, and there never was an English factory at the place; for that commonly called Maldeh is not even in this district. The ruinous houses, which are overgrown with weeds, and shelter dirt of every kind, together with the narrowness and irregularity of the streets, give Maldeh an uncommonly miserable appearance. I think that it looks worse than even the towns which consist entirely of thatched huts. The want of usual employment has also introduced many objects in the most squalid appearance of want, especially distressing as it is intermixed with a degree of wealth and luxury, that are unknown in the other parts of the district. The police is not only defective in want of roads, streets, bridges, light, and cleanliness, but the town swarms with villains, who have been educated in the jail at Dinajpoor. There are very few open shops, and the markets are inconceivably ill supplied, as usual indeed in India, wherever a great many Europeans have not been settled; and no tolerable animal food of any kind, no bread, and no butter are procurable in the market. Almost every person, however, is a trader, and will retail in his house. So far from the commerce or manufactures of Maldeh having improved the country, the whole for 12 miles north from this town, with an excellent soil, is almost a desert. The only public building, except the mosques which Maldeh possessed, was a Sarai or

public inn, containing a great many small unventilated dark chambers, surrounding a square, in which travellers might lodge, and merchants might deposit their goods. This work was erected by a Muhammedan merchant, brother to the person who built the principal mosque. Ayiyar (Jyoe R.) at the junction of the Tanggon and Mohanonda, containing perhaps 200 dwellings, must be considered as a town, although it has no brick house. Its streets are wider, and it has more the appearance of comfort than Maldeh, and it is a place of considerable trade and manufactures.

Purusa—is very much intermixed with the district of Rajshahi, and is of a very irregular shape; but may extend about 24 miles from north to south, and 19 from east to west; and may contain about 260 square miles. The Darogah resides at Ghatnogor, not near the centre of his division. There is only one Munsuf for this division, and that of Lalbazar, which are separated by the intervention of Potnitola, and each of them is larger than that division. About 24 miles may be inundated land, covered mostly with long reeds, but perhaps six miles may be cultivated with Boro rice. Tanks, rivers, and marshes may occupy 12 miles; woods, 10 miles; steep barren places, burial grounds, markets, and roads, 16 miles; deserted lands, or those cultivated occasionally, 8 miles; and about 190 are fully occupied. The soil, where not inundated, is a hard clay, in some places pretty high, in others very level. Three wealthy farmers have some brick buildings in their dwelling houses, and a good many have small brick mosques; almost all the huts have mud walls, and some of the better kind have wooden rafters to support the roof.

The most remarkable Hindu place of worship is a small temple of Komol Doheswori, which, as usual, is supposed to be of great antiquity; but as it has been endowed by the Jahanggirpoor Zemindars, and receives 200 rs. a year from that family, it has probably been erected by some of them; and is therefore quite modern. There is no remarkable place of worship among the Moslems. There are many old tanks, and some of them are rather large; but none very remarkable, nor is there any tradition concerning the persons by whom they were dug. The road made by Hoseyn Shah passes through the northern end of the division, and is the only antiquity of which I heard. This division has eight markets, of

which two are marts, and Nitpoor is a very considerable one, three other places have some shops. The largest is Nischintapoor, which contains about 100 houses.

GONGGARAMPOOR—is of an exceeding irregular shape, extends about 26 miles from north to south, by 16 from east to west, and may contain 320 square miles. The Darogah and Munsuf reside at Dumdumah, towards the north-west, at a distance from the centre of the division. Rivers, marshes, and tanks may occupy 20 miles; inundated lands may amount to 30 miles, of which 8 may be cultivated as Chora land, or for Boro rice; 30 miles of the high land may have a free light soil; and 240 may consist of hard clay. Besides the portion of inundated land that is cultivated, 20 miles of a loose soil, and 220 of a hard soil, are said to be fully occupied; 16 have been deserted, or are occasionally cultivated; 2 may be occupied by woods or bushes; and 12 are barren roads, market-places, and the like.

About ten habitations may have one or two chambers of brick within their premises. On the east side of the Punabhoba, most of the huts have mud walls, and about 150 farmers have small brick mosques in their premises. On the west the huts are miserable, and consist of hurdles. This part occupies $\frac{1}{4}$ of the district, but is almost entirely destroyed by inundations, rivers, and marshes, so that it contains not above $\frac{1}{12}$ of the lands that are in full cultivation.

The antiquities of this district are very numerous; and in giving an account of them I shall have occasion to mention most of the places of worship, and most of the public works, of any note. I shall proceed in the order in which I saw them. First, about seven miles southerly from Dumdumah, is a very fine tank named Topon (Tubbone R.), which is the largest in the district. The water seems to have extended 4100 feet from north to south, and 1150 from east to west, and the space occupied by the bank is about 300 feet wide, making the total dimensions 4700 feet by 1750. On the east and west sides have been three entrances through the bank; and each had a descent to the water (Ghat), lined with brick. On the south side have been two entrances, and on the north side one. Opposite to this is a small heap, probably the ruin of a temple, and beyond this is an avenue between two small tanks, which, together with the avenue, occupy the width of the great one.

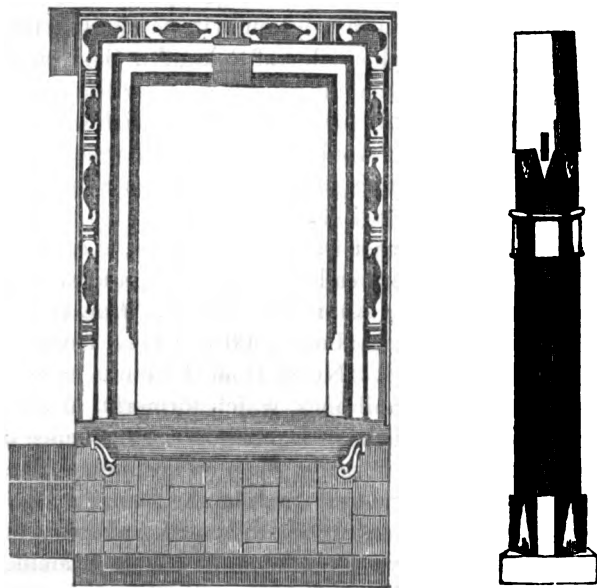
To the north of these is a space of about half a mile in extent, broken with small tanks, like the situation of a town, and near the northern extremity of this is a large heap of bricks covered with soil, once probably a temple of considerable size. These tanks are said to have been made by Ban Raja, and to have been the place where he performed his religious ceremonies (Toposya), and where he swung before Sib for 1000 years, suspended by hooks passed through the skin of his back. It is from this circumstance that the name of the place is derived.

East from Topon, on the banks of the Punabhoba, is Kordaho, now a place of some trade; but celebrated as having been the place where Krishno burned the 998 arms of Ban Raja, which he had cut off in battle. The proper name of Dumdumah is Devi Koth. It received its present appellation which signifies the place of war, from its having been a military station during the early part of the Muhammedan government, as it probably was then on the frontier; for I have already mentioned, that the province called Barondro extended no further north than this place. While the troops were stationed at Dumdumah, the chief officer, under the title of Wazir, seems to have resided on the banks of a very noble tank, which is named Dahal dighi, and has evidently been formed by Muhammedans, its water being about 4000 feet from east to west, and 1000 from north to south. It is probably exceedingly deep, as the banks thrown out are very large. They have been a good deal spread; and form many irregular rising grounds, finely planted, and surpass in beauty anything of the kind that I have ever seen. On many different parts, especially towards the north-east corner, are heaps of bricks, probably the ruins of the houses that were occupied by the Moslem officers. On the centre of the north side is the monument (Durgah) of a saint (Pir) named Mullah Ataudin, contiguous to which is a small mosque. Both are very ruinous, but a canopy is still suspended over the tomb, which is much frequented as a place of worship, and the Fakir has an endowment of 200 bigahs (about 100 acres) of land. The present occupant is a remarkably handsome man, and has a perfect formed Arabian countenance, although his ancestors have held the appointment for several generations. A descent, paved with stone leads down from these buildings to the tank,

and the materials have been evidently taken from a ruin; as broken columns, parts of doors, windows, and stones variously carved, are intermixed with such as are quite plain. Traces of the human form on the pedestal of a column, show that the ruins from whence they were taken have been those of a Hindu building, and confirm the tradition of the supply having come from Bannogor. The Wazir, who is reported to have founded the mosque, and to have dug the tank, is said to be buried between them, and a large cavity covered by long stones is shown as his grave. From an inscription over the gate of the mosque, it appears that it was built before the time of Ataudin and of Sheykh Mukbu (another saint), by Wazir Shawr Musaur, of Mozofurbad, commander of the troops of Firuzabad, in the reign of Hoseyn Shah, Sultan of Hostina, son of Mozafur Shah, A. H. 718. From an inscription under the former, it would appear that a place for prayer (Gombuz), which has been erected behind the tomb, was built by the order of Sekundur Shah, son of Majahud Shah, son of Ayas Shah, A. H. 765. Also, from an inscription in a wing of the mosque, it would appear that this was erected as a place of prayer for Ataudin, by Futeh Shah, son of Mahmud Shah, A. H. 845. A part of the mosque called Ḥamada, from an inscription in it, was built in the reign of Ky Kaos Shah, by the order of Sekundur Sani, or the 2d, A. H. 872. Finally, from an inscription over the door of an apartment to the right of the mosque, and which was a kitchen for the use of Fakirs, it would appear that it was built in the time of Mukhdum Molnah Ata, when Mozofur Shah was king. The date is no longer legible.

At a little distance east from Dahal Dighi, is another tank of very large dimensions, called Kala Dighi, and supposed to have been dug by Kala Rani, the spouse of Ban Raja. Exclusive of the banks, it is about 4000 feet long, from north to south, by 800 feet wide. North from the tanks called Dahal and Kala, are many small ones, which formerly, in all probability, were in the suburbs of Bannogor, the residence of Ban Raja, of whom I have already given an account. The ruins of Bannogor occupy the east bank of the Punabhoba, which here runs from north-east to south-west for about two miles, beginning a little above Dumdumah. I first examined the citadel, which is a quadrangle of about 1800 feet by 1500, surrounded by a high rampart of bricks, and on the south and

east by a ditch. The remainder of the ditch has been obliterated, or destroyed by the Punabhoba, which, in the time of Ban Raja, is said to have passed to the north of the present course of the Brahmani, and many large water courses, which are to be seen in that direction, render the tradition probable. On the west face of the citadel is a large projecting part, probably the outworks before a gate. In the centre is a large heap of bricks, said to have been the Raja's house; and on the east face is a gate, and a causeway about 200 feet long, leading across the ditch into the city, which has been square, of above a mile in diameter, and has been also surrounded by a rampart of brick, and by a ditch. Towards its south-east corner is the monument of Sultan Shah, which is ruinous, but a Fakir has a small endowment, and burns a lamp before the tomb. The monument is much frequented by the faithful, and contains many stones, which from their position have evidently been taken from ruins, and the pillars are of the same order with those at the mosque of Dahal Dighi. They are somewhat more elegant than those at Adinah, and I have procured a drawing of one, and of a door, which I have no doubt be-

longed to Bannogor. Near the monument of the Muhammedan

saint are the two celebrated pools, Omrito and Jivot, which I mentioned in my account of Ban Raja. In their present state they are very different from the pools of life and immortality, which their names imply, as they are filled with abominably dirty water. They have never been large; but the size of the heaps of brick round them, shows that they have been surrounded by large buildings; and probably they have been sacred ponds (Push kornis), which occupied the areas of two temples. The women of the vicinity who have been unfortunate in their children, and have lost many by death, frequent these pools, and carrying with them two living fish of the kind called Kamach Singgi (Silure fossile) bathe in each pond, and make an offering of a fish.

In Omrito, a projecting stone was pointed out as the dead cow, that had been thrown into the water by the infidel Yovons, in order to deprive it of its virtues. I proposed to take it out, which excited a smile of contempt in my guides, who assured me that one of the Dinajpoor Rajas had tied ropes to it, and with three elephants had attempted in vain to procure this monument of antiquity. The Pandit attached to the survey, who is perhaps somewhat of a philosopher, went next day with a dozen men and some ropes, and pulled it out with some degree of exultation. He found it to be an image of the bull Vrisho, which is usually worshipped by the sect of Sib, and which the infidels very probably threw into the pond. This and the image of Gones, now at Dinajpoor, which I have already mentioned, together with the custom of swinging, attributed to Ban Raja, pretty clearly show the religion of that tyrant (Oesur), who opposed Krishno, as the temples of Sib, constructed by Ravon, which I have seen in the south of India, point out the worship of the opponent of Ram. At the north-west corner of the ruins of the town, near the Punabhoba, are the remains of the monument of another Muhammedan saint, Pir Havakhari, which also has some columns, and other stones, and the same Fakir who lights the lamp at the tomb of Sultan Shah, attends on this, which is also much frequented by the devout.

Near this the river has undermined part of the ruins, and is encroaching on a thick bed of bricks, in which stands a column of granite, of the same order with those in the monuments of the Muhammedan saints. At a very little distance from the

north-east corner of the city is a large heap of bricks, said to be the ruins of a temple dedicated to Virupakhyo (Sib) by Banraja. In the time of Raja Ramnath, of Dinajpoor, two religious men were informed in a dream where the image was concealed, and hastened to inform the Raja of their discovery. He accordingly sent people with the two good men, who pointed out the place in the ruins, and, on digging, there was found a Lingga, for which the Raja built a small temple, and settled 360 bigahs (about 180 acres) of land, with a monthly pension of 30 rs. on the two Brahmans, whose children now enjoy the fruit of their ancestors' virtue. It is said and believed in the neighbourhood, that this image when discovered was a cubit high. It has since gradually diminished, and is now reduced to a span. The new temple is very ruinous, and the Brahmans, who have the endowment will probably wait for a repair, until another dreamer can procure another Raja to perform that work of piety. It is now, however, the chief place of Hindu worship in the division. About half a mile west from the north end of the city, on the opposite side of the Punabhoba, is a considerable heap of bricks, overgrown with bushes, and placed on the side of a small tank. For any thing that appears to the contrary, this, as is related, may have been the house of the princess Usha, whose fondness for Oniruddho brought about the destruction of her father and native city.

About three-quarters of a mile beyond this heap, and on the other side of the Brahmani, is a place called Narayonpoor, where there are many small tanks and heaps of bricks, like an old town. This is said to have been the field where the great battle took place between Krishno and Banraja. Near one of the tanks, evidently of Hindu construction, is the monument of a Muhammedan saint, Pir Bahaudin, from whence to the tank is a large pavement and stair constructed of stones, that have evidently been taken from ruins. Near it is a small building of brick, much ornamented with carving, and which, from its resemblance to the Mausoleum of Ghyashudin at Peruya, probably contains the tomb of some person of rank.

The great number of stones in these ruins, and a vast many, that have been removed by the Dinajpoor Rajas to construct their works, show, that Bannogor has been a

place much ornamented, and its walls show, that it was of considerable size and strength. The people here allege, that all the stones, which are to be found in the buildings of this district, have been carried from it, and that Gaur owed its most valuable materials to the ruins of Ban Raja's edifices.

The only other work, that I shall have occasion to mention, is Pran Sagor, a tank made by Raja Pran Nath of Dinajpoor. Its basin of water is 2600 feet by 800; but it sinks into insignificance, after mentioning the grander works of the mighty heroes of antiquity. In this division are 16 market places. Eight of them are marts for exportation, and of these Dumdumah, Noyabazar, and Kordaho, are small towns.

Potiram—is about 22 miles from north to south, and 17 from east to west. It is divided into nearly two equal portions by the Atreyi river, and contains about 280 square miles. About 18 miles may be occupied by tanks, rivers, and marshes; 17 miles are inundated, of which perhaps 10 miles are sandy banks of rivers (Chora), that are cultivated; 60 miles are of a free soil, of which 35 are fully occupied; and 185 are of a hard clay, of which 158 are fully occupied; 17 miles are deserted, or only cultivated occasionally; and 35 miles are poor sterile land, or burial grounds, roads, market places, or the like. Although three Zemindars reside in the district, one of whom pays 20,000 rs. a year revenue, there is no dwelling that consists entirely of brick; but about 12 families have one or two rooms of that material, and about an equal number have small brick temples or mosques within their premises. The greater part of the huts have mud walls. There is no place of worship remarkable either for its supposed holiness, or for its building. There are no ruins of note. This division contains 19 market places. Five are marts for the exportation of goods, and three other places contain some shops. Potiram, on the east side of the Atreyi, including Nawabgunj, must in Bengal be reckoned a town, and contains above 100 houses, rather neat and comfortable. It has however no building of note. Kongyargunj, on the west side of the same river, is a more considerable place, and has above 150 houses, with a good many shops and artists.

Potiram, and also occupying both sides of the Atreyi for

about 20 miles, is the division of Potnitola, which extends about 13 miles from east to west, is of an oval form, contains about 240 square miles. Rivers, tanks, and marshes, may occupy 15 miles; free sandy soil on the banks of the Atreyi 30 miles; and stiff clay 195. Twenty miles of the former, and 182 of the latter may be fully occupied; for this is undoubtedly one of the best cultivated portions of the district; while perhaps eight miles have been deserted, or are occasionally cultivated; 10 miles may be occupied by burial places, roads, markets, or steep banks; and five by woods, among which some are of sal.

Although four branches of the oldest and most considerable family among the neighbouring proprietors reside in this division, only two dwelling houses contain any chambers of brick. Most of the huts have mud walls. About 40 wealthy farmers have lately built small mosques of brick in their premises; but there is no remarkable place of worship. The remains of antiquity are neither numerous nor extensive. Towards the north-west extremity of the division is Dhivor Dighi, which was examined by the Pandit. He reports, that it may have contained 40 or 50 bigahs of land, and is said to have been dug by a Dhivor Raja, who lived about a thousand years ago. In its centre is a stone pillar of eight sides, 22½ cubits in length, and 6½ cubits in diameter. On its top are traces of iron ornaments; but it has no carving nor inscription. Near it is a place sacred to Bhairov, and a small wood of the trees, which usually grow on ruined towns, but no other indications of there having been a city.

At Mosida, on the west side of the Atreyi, about seven miles below Potnitola, is the monument and tomb of the Muhammedan saint Sudurdaha, which is a good deal visited. Near it is the tombs of Budurdaha, father of the holy man, and of several persons of the same family. The tombs are constructed of brick, and surrounded by a wall, in which are placed several stones, that have evidently been taken from ruins, as they have been cut in various forms, of which fragments only remain. Near them are some fragments of pillars, and besides many other stones, the lintels of two doors, on one of which is an escutcheon containing a figure of Gones. There can therefore be no doubt, that the Muhammedan building has been erected from Hindu ruins. The *Ciceroni*,

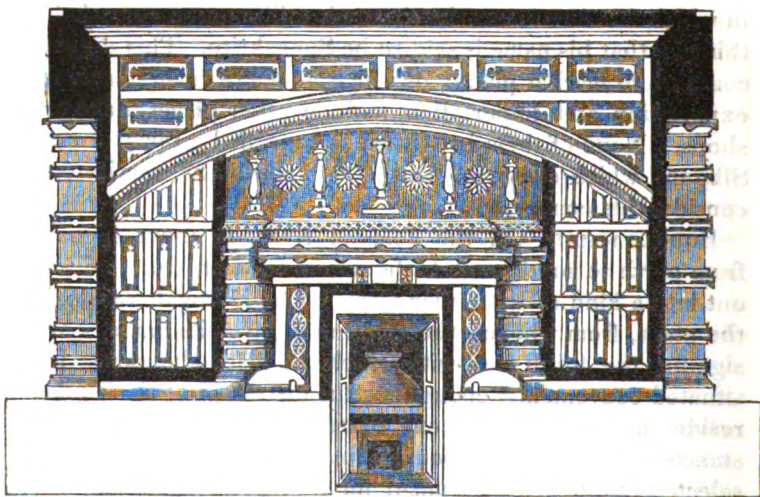
who was the chief of the village (Mondol), and a good Muhammedan, attributed the whole carving to the saint. He was, however, a good deal staggered by Gones, whom he had never before observed. He had no tradition concerning the place, from whence the holy man had come, when he lived, who had been his predecessors, nor who had been his benefactors; but said, that his forest contained many small tanks and heaps of bricks. I walked with him the whole breadth of the wood, about half a mile, and what he said was one half of the length, which might be a mile, and found that his account was true. Near the monument I could trace the foundations of buildings of a considerable size. I have no doubt, therefore, but that this has been a Hindu city of some consequence, although tradition is silent on the subject.

At Mahigunj on the east side of the Atreyi, near the northern extremity of the division, is said to be such another place, with a monument of a Muhammedan saint named Mohi Sontosh, who has communicated his name to the district (Purgunah), in which his monument is situated. The most remarkable thing is, that his name is said to be Songskrito. This division contains 20 market places, of which four are small marts for exportation and importation, and no other places have any shops. None of them is entitled to be called a town, except Sibgunj, which contains about 300 houses, and carries on a considerable commerce.

Bodolgachhi—On the Jomuna river, is about 17 miles from north to south, and 15 from east to west; but is drawn out into a kind of triangular form. The Darogah resides at the place, from whence the division derives its name, which signifies the Jujub tree, with which the place abounds. It is situated conveniently enough for the district; but the Munsuf resides at Sibgunj near one extremity. Under all circumstances however, a more convenient place could not have been selected; as he is also Munsuf for another division, and that not immediately adjacent.

This division may contain 270 square miles, and, although very valuable by nature, is but indifferently cultivated. Rivers, marshes and tanks may occupy 17 square miles; poor sterile steep land, roads, burying-grounds, market-places, &c., 18 miles; inundated lands 13 miles, of which probably six are occupied; rich free soil 110 miles, of which not above 54 are

properly occupied; good hard clay 130 miles, of which about 100 are fully occupied; 60 miles have been deserted, or are only occasionally cultivated; and about eight are overgrown with woods, being ruined towns or villages.

Only two very small proprietors reside in the district; but there are in it five brick houses belonging to sugar manufactures. One of them, which I saw, is built in the Moorish style, and is a respectable looking place. The proprietor I believe, has landed estates in other districts. A large proportion of the huts have mud walls. The most remarkable place of worship is a small temple, at a place called Yogighopa, towards the north end of the district. The temple is dedicated to Sib, and is served by priests from the west of India, who are called Yogis. The shrine, where the image is placed, resembles very much a tomb, and is sunk below the level of the ground, but is covered by a neat enough building, of which the native painters made a drawing. The materials

appear to me to have been taken from a ruin, as some stones appear, from their ornaments, not to have been intended for the place in which they stand; and near the temples are several fragments of stones, that have been much carved, and are lying as materials, for which there was no demand. The temple in fact, stands upon a large space of ground that is

covered, and raised above the level of the adjacent country by bricks, and which contains several tanks. The Yogis say, that these are the remains of the house of Devpal, a prince who lived 5 or 600 years ago. About a mile to the west, they say, at a place called Amari, are similar ruins belonging to the house of Mohipal. In order that I might see the ruins of the abode of Chondro Pal, which are the most considerable, the Yogis directed me to proceed to Chondira, a village about a mile to the east. I was however, under the necessity of taking a very circuitous route to avoid a marsh; and, on my reaching the place, could find no other guide than a Muhammedan Mondol, who never had heard of Chondro Pal, but conducted me to the tomb of a saint constructed of ruins. He said also, that at a neighbouring place called Kotok, there are many bricks, and small tanks, but that without previously clearing the road, it would be impossible for me to visit it. A little way east from this at Dhorol, I found many old tanks, and heaps of brick, said to have been the abode of a Zemindar, who possessed the country before it was given to the Dinajpoor family.

The most remarkable ruin in this division is situated about eight miles north-east from Badolgachhi on the frontier of Lalbazar, and is called Goyal Chitar Pahar, and Paharpoor. I found it an immense steep heap of bricks, from 100 to 150 feet in perpendicular height, covered with bushes, and crowned by a remarkably fine tree. On ascending about half-way, I found three large rough stones, on which I had been led to expect an inscription; but I found afterwards, that the person who gave me the information, although a Brahman and a Zemindar, could not read. On the summit is a small chamber of brick, with a door facing the east, and a small niche towards the west. This is said to have been the residence of a Muhammedan hermit, which is very probable. The heap of bricks, or hill as it is called, has been surrounded by a square rampart, the ruins of which contain many bricks and each side may be 400 yards in length. The rampart is overgrown with trees, but the space between it and the hill is clear, contains some small tanks, and indications of brick buildings, especially towards the corners of the rampart. The thickness of this would induce one to believe, that the place might have been a fortress; but no ditch can be traced, and the heap,

which is by far the most remarkable part of the ruin, could not have answered for defence. I am therefore inclined to believe, that it has been a temple, and its great steepness and height, induce me to suppose that it has been solid, like many of the temples of Buddha in Ava and Nepal; for a hollow temple, of which the roof had fallen in, would be much flatter. My conjecture is confirmed by the vicinity of the several places, which are said to have belonged to the Pal family, who were worshippers of Buddha.

In this division there are 16 market-places, of which three are marts. One of them Sibgunj on the Atreyi, is pretty considerable, and contains 300 families, among whom are many shop-keepers and artists. Badolgachhi contains about 100 houses and is chiefly remarkable for the manufacture of sugar. Badol is a name, that extends very far, and includes both the Company's factory at Syamgunj (Saum Gunge R.), and a place called Hengriyapathar, where an annual fair is held for 20 days. During this, 200 shops are opened at the place, and many people assemble to celebrate a religious ceremony, that was established by one of the Dinajpoor family.

LALBAZAR—is an irregular pentagon, much intersected by the Jomuna and its branches. The Darogah resides at a distance from the centre of his division, but near the middle of what is well occupied, as the north-west part is mostly overgrown with woods. The division contains about 280 square miles. Of these 12 miles may be occupied by rivers, tanks, and marshes; 12 by inundated land, of which four may be cultivated; 12 by steep broken land, sterile ground, and burial, and market-places; 52 miles by deserted land, of which 34 may have grown into forests, and 18 may be cultivated occasionally, and are still clear; about 192 miles are fully occupied, of which perhaps 122 are of a light free soil uncommonly rich, and 70 are of a stiff hard clay. Setting aside the 24 miles occupied by rivers, marshes, and inundated land; 164 will be about the proportion of light, free soil, and 92 that of the stiff land.

Two of the Zemindars that reside in the district, have houses of brick fit for gentlemen; especially that of Baidyonath Chaudhuri, who is the most intelligent person with whom I have conversed on Indian architecture; and who is carrying on buildings with great spirit, in which he naturally takes a

pride, and is much gratified by having an opportunity of showing them to strangers, which he does with great urbanity. Eight manufacturers of sugar also have brick houses, suitable to decent circumstances. One of them a Muhammedan has lately purchased land.

The two principal Zemindars have built very considerable temples; but, being both men of low birth, these are considered as of no value, and the only place of worship that is esteemed by the natives, is a small temple of Harogauri, which is much frequented four or five Tuesdays in spring. Imamdi, one of the sugar manufactures, that I mentioned, has built a pretty large mosque, and 10 or 12 small ones. About 20 rich farmers have small mosques within their premises, but the only Muhammedan place of worship that is much frequented, is the monument of Nimay Shah, on the banks of the Tulosi.

At the monument of Nimay the channel of the Tulosi, as well as the adjacent bank, consists of bricks and stones, and a high space covered with trees, and about a quarter of a mile in diameter, contains large quantities of these materials. Among these I observed a stone, apparently the capital of a pillar, which was ornamented with four tigers' heads. A brick at the saint's monument had on it a human figure, and the same was the case with a stone. The materials have therefore been taken from a Hindu building, and the tradition concerning the ruin is, that it belongs to the house or palace of Ushopal, which is called Atapoor. At a little distance to the west of this is just such another ruin, said to have been a house of Mohi Pal. Between these places are two large tanks, and a high mound like a road leads from the one to the other. On digging into this mound it has been found to consist of bricks and stones, huddled together. Among the stones some are carved, and seem to have been parts of doors or windows. The buildings of the Pal family, therefore, have probably been constructed from the ruins of former times; and very probably, according to tradition, from the ruins of Bannogor.

A little south from the ruins of Mohipal's abode is a small square rampart and ditch, within which an indigo work has been erected. The proprietor, Mr. Tucker, in removing a heap of earth in this old fort, came to a small building of

brick, 14 cubits square within the walls, and these are 6 feet thick. On removing the earth from the cavity, the workmen came to a small arched building like a tomb, but it contained no bones. There is neither door nor window in the wall. The building is therefore in all probability a tomb, and belonged to a person of some sect, that did not burn the dead.

Near the temple of Horogauri, already mentioned, is the pillar containing an inscription, of which Mr. Wilkins has given a translation in the first volume of the Asiatic Researches, and which refers to the Pal family. The tradition of the vicinity mention Mohi, Chondro, Usho, Dev, Hudom, Kasi, and Ojoy Pal; but of the three last I have not seen any monument. The vicinity of Harogauri, and of the pillar is entirely waste, and contains many little tanks, like the situation of a town; but I could not observe, nor hear of any remains of buildings. At Apaul and Sontosh there have been small towns, with several inconsiderable temples and houses of Zemindars, whose lands were seized by the Dinajpoor family, and which, together with the two houses built by Ramnath, and some later Zemindars, now form ruins, for every thing in this climate hastens to decay. In this division there are 25 markets. There is no place large enough to be called a town, but there are four small marts for the exportation of the produce, and six places besides have a few shops. At the saint's tomb, on the ruins of Usho Pal's house, is held an annual fair, where about 2000 people assemble, and trade as well as pray.

Chintamon—is of an oblong form, 20 miles from north to south, and 13 from east to west. It may contain about 200 square miles, and extends from the Atreyi in one part to the east side of the Jomuna, which runs through it for about 15 miles. About 12 miles may be occupied by rivers, water courses, marshes, and tanks; six miles may be inundated land, mostly covered with reeds, but a little is under indigo; 74 miles may be of a free rich soil; and 108 miles of stiff clay. Setting aside the 18 miles inundated and covered by water, eight miles may be occupied by steep barren places, burial grounds, market places, and roads; 15 miles are occupied by woods, mostly dwarf sal; 34 miles are either only cultivated occasionally, or have been altogether deserted;

and 125 are fully occupied, of which 50 are of a rich free soil, and 75 are of stiff clay.

Nine families have in their premises, one or two rooms built of brick; but no dwelling consists entirely of that material. There are many small (Mondirs) Pagan temples of brick, which have been built by sugar-boilers, and other merchants; but the only two objects of Hindu worship, that have the smallest celebrity, are the Jomuna river, in which the people of the vicinity bathe on a certain day in spring; and an image of Sib, which is called Yamoleswor, which is supposed to have arisen spontaneously from the earth, and which is worshipped by about 2000 people assembled on the proper day. There is no Muhammedan place of worship remarkable for its buildings, but the monument of Mir Medni at Phulvari is the most frequented. About 100 small mosques of brick have been erected by wealthy farmers, and others within their premises, and are served by the master of the family, who lights a lamp every evening, and prays at the proper hours.

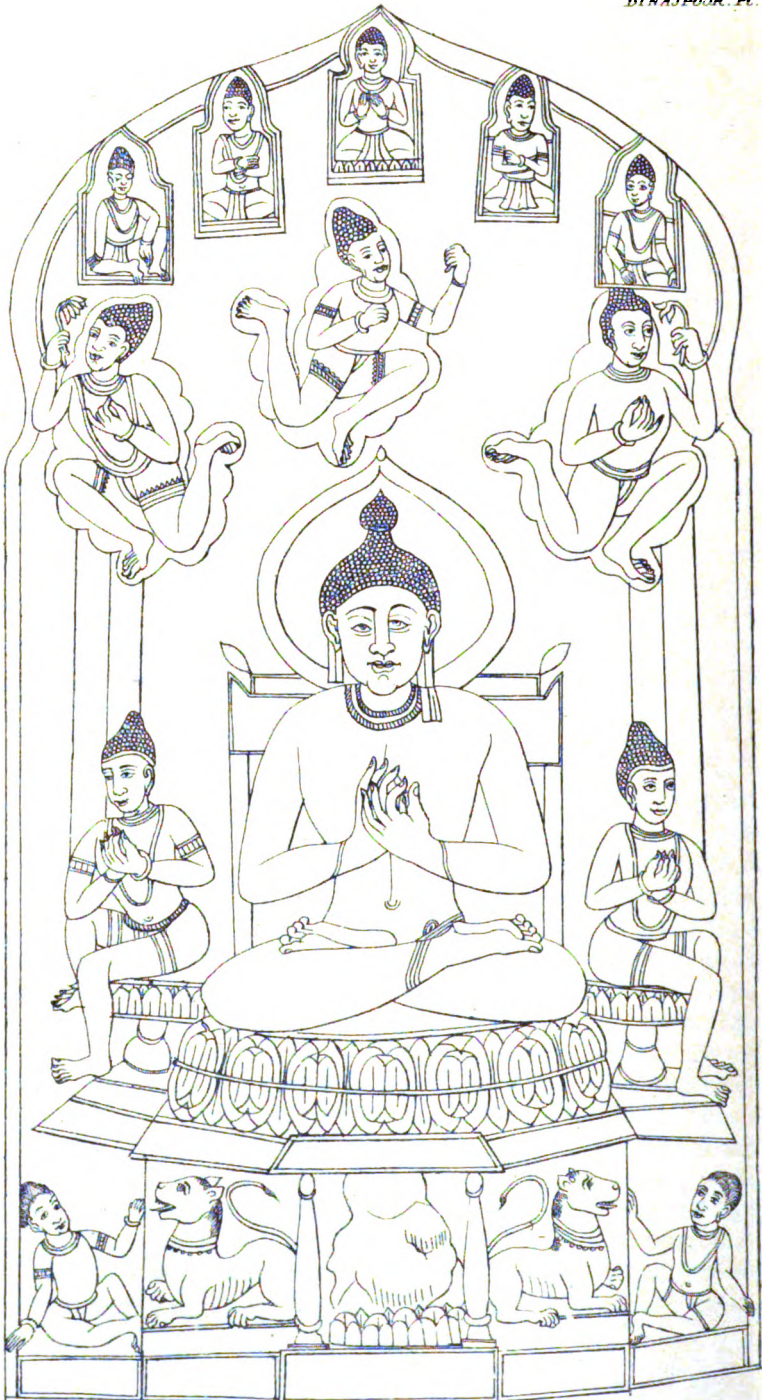
In six places some ruins are to be found; but they are small, and in all probability of little antiquity. The most considerable is Pukhoriya, about six miles south-west from Chintamon. Here is an elevated space of ground, about a mile in diameter, which contains many small heaps of bricks, and about 10 or 12 tanks; one of which is said to have been dug by a Raja's mother (Rajar Mar Dighi). On the surface of the ground are three stones, one of which contains an image. This town is said to have belonged to a Raja Gauri Kanto, son of Vasudev, who will be soon mentioned. At Madapara, 10 miles south-east from Chintamon, are said to be the ruins of a small town built by a servant of the Dinajpoor family.

Vasudev, a Zemindar, whose daughter married the first of the Dinajpoor family, that rose to any eminence, had two places of residence in this division. The first called Mohonpoor is about six miles south-east from Chintamon, and is said to have been a town. The other is called Vasudevpoor, and has been a fortress of inconsiderable size. It has had a double rampart, and has contained some bricks. A Pathan, named Murowot Khan, is also said to have resided in this fortress.

In a forest called Hira, which occupied the north-east part of this district and the north-west of Nawabgunj, is a place named Kali Shohor, where there are remains of brick buildings, the founder is unknown. Six miles north-east from Chintamon on the side of the Jomuna is a small fort, which contains about 50 acres, and is called Gorgovindopoor. Within is said to be a pillar of stone, but there is no inscription, nor is the founder known. In this division are 25 market places. Goods are exported and imported from four different places, none of them considerable. Five places besides contain shops. Among these Chintamon is the most considerable, and contains about 200 families. Sujapoor and Khoyer Vari may also be considered as small towns, each containing about 100 families.

Hawora—occupies both banks of the Jomuna river for about 11 miles, and extends from thence to the Korotoya. It is somewhat of a triangular form, contains about 180 square miles, and extends about 20 miles from north to south, and 18 from east to west. About 10 miles may be occupied by tanks, rivers, and marshes; 20 may be inundated, and are chiefly sandy low lands (Chora), partly used for pasture, and partly cultivated for indigo, or cucurbitaceous fruits; 90 miles may be of a stiff clay; and 60 of a free soil. Setting aside 30 miles of land, that are inundated, or altogether occupied by water, four miles may be occupied by markets, roads, burial grounds, and steep barren places; 11 miles by woods; 22 by lands, which have been deserted; and 113 are fully occupied, of which 45 are a free soil, and 68 stiff clay. One proprietor of land, of the Dinajpoor family, has a handsome although small house, which is built of brick, after the Anglo-Indian fashion; but he does not reside at it. This is the only dwelling of brick that belongs to a native. The huts here, and in general on the eastern frontier towards Rongpoor, are worse than usual, being very flat and low in the roof. This having been on the frontier of Motsyo, its sovereign, Virat Raja, is said to have had a considerable part of his army stationed here; and a ruinous fort, called Viratpat, is said to have been his usual residence, when he came to inspect the station. The Pandit, who went to Viratpat, says, that the rampart has been of brick, and, that within there have been some buildings of the same material;

Image of Maghunath.

London 1838. W. H. Allen & Co 7, Leadenhall St

but the size has been inconsiderable. On the outside are two or three small tanks.

At Deyuli, 8 or 10 miles north and west from the Thanah, and near Viratpat, is said to have been the residence of Modon, the principal general (Senapoti) of Virat Raja. The Pandit, who examined the place, says, that he could trace the remains of a fort about a quarter of a mile square, with a brick rampart, and surrounded by a ditch, within there is a large tank, and a heap of bricks, said to have been a temple of Vridheswori. There are no stones either in this or in the fort of Virat Raja. On the north side of the fort are many small tanks, said to be 72 in number, and it is also said, that each was dug by a servant of the general's.

About four miles and a half north from the Thanah are the ruins of a fort and city said to have belonged to Kichok, the brother-in-law of Virat, and which I visited. The fort has been about half a mile square, and surrounded by a rampart and ditch. It is now overgrown by trees and bushes. I saw no bricks; but it is said, and I believe with truth, that there are many in the soil. At the north-west angle of the fort is a Hindu tank of some size. North from this is a heap called Draupodidhab, which is said to have been the house of a person of distinction in the family of Kichok. On the north side of the fort is Roghunathpoor, a high space of ground overgrown with trees and bushes, which has probably been a suburb, and which derives its name from a Sthan, or abode of the god Roghunath. In its present state this is a very simple place of worship, being a square terrace of earth, about 2 feet high, and 12 square. The Pandit was informed, that the image was originally of brass, and was stolen; some time afterwards, the present one was found in digging by accident, and a low Sudro acts as Pujari. This person has spread a report, which as usual is believed, that several people who have attempted to remove the image, have been afflicted by some dreadful sickness, or have been visited by horrible apparitions. The image is of course called Roghunath; but appears to me to be that of a Lama, or incarnation of Buddha, with a representation of different Buddhas sitting in heaven, and three females, or angels, flying between, while an angel sits on each hand of the incarnation. The images, as represented in *Plate* V., are carved on a stone about 16 inches

high, and 10 broad, and so strongly resemble pictures from Thibet, which I saw in Nepal, and had there explained to me, that I have no doubt concerning what they are meant to represent. The stone is supported behind by the female part of a Lingga.

About three quarters of a mile beyond the fort, on both sides of the great road between Dinajpoor and Rongpoor, and near the Korotoya, are the ruins of the city, which depended on Kichok. At this place are many bricks, and among other traces of buildings are shown those which belonged to the house Hiravesya, who was a female dancer that had very great influence over the soldier. This house has been about 60 feet long, by 20 broad, from east to west, and on its east side has had a yard, surrounded by a brick wall, about 60 feet square. A smaller building, probably a gate and porter's lodge, has been on the east side of the yard. On the west side of the house there are traces of a small tank. It is said that the whole house was covered with enameled tiles; but of these I saw no remains.

In all parts near the Korotoya, from Hawora down to Ghoraghat, traditions remain concerning a Gopichondro, his son or descendant Hovochondro, and the minister of the latter named Govochondro. The first lived at Gopinathpoor, and the second at Vagdwar, both in the Rongpoor district, where I shall have a better opportunity of tracing the accounts of these personages.

The principal Hindu place of worship in this division, is a part of the Korotoya, near where the great road passes from Dinajpoor to Rongpoor, and which is called a Tirtho. On a certain day, which happened to be that on which we passed, from 20,000 to 25,000 people assembled to bathe. The Muhammedans so far adopt the custom, as to throw garlands into the river; but they do not bathe, and are considered by the Hindus as unworthy of that honour. This place is said to have been consecrated by the god Sib, when he created the Korotoya; and it is generally admitted by all persons, that the bathing at this place on the proper day, is just as meritorious as bathing in the Bhagirothi (Ganges) on a common occasion. The people here indeed contend, that this particular part of their rivers is just as good as any part of the Bhagirothi, on any day of the year; but my people from the banks

of the Ganges laugh at such pretensions. At a place called Parbotipoor, six miles north from the Thanah, the Pandit discovered a hole under a tree, in which are deposited a plough, and other implements of agriculture. They are made of stone, are of a large size, and are said to have belonged to Bhim Raja, contemporary with Virat, and son of Pandu, the lawful sovereign of India. The neighbouring farmers offer a sacrifice to these implements, on the day when they begin to plough. There are in the division ten or twelve temples of brick, but these are not in any sort of reputation with the people, although one of them is of tolerably large dimensions, and has a rath or chariot for carrying the image in procession; but there is nothing miraculous about any of them, and they are considered merely as the private marks of the piety or vanity of the individuals by whom they were built. The state of the Muhammedan places of worship is nearly the same. About ten wealthy men have built small mosques in their premises.

The market-places in this division are twenty; of these three are marts for exportation and importation. The only considerable one, however, is Hawora, or Ranigunj, which contains above 100 houses, and has a great deal of trade. About eight other places have some shops. Of these Yosayi is the most considerable, and is a small town containing at least 100 families.

Nawabgunj—is situated on the east side of the district, and on the banks of the Korotoya. It is about 16 miles from north to south, and 11 from east to west, and of an oblong form. It contains about 150 square miles, of which six may be occupied by tanks, rivers, and marshes; ten may be inundated, and are mostly low sandy banks, of which four may be cultivated; twenty may be a red clay soil; 62 may be a light coloured hard clay; and 52 of a friable mould. Setting aside the lands wholly or partially under water, and occupying about 16 square miles, there will be about 6 miles occupied by market-places, steep sterile land, roads, and burying-grounds; 16 miles overgrown with woods; 18 miles deserted, or only cultivated occasionally; and 94 miles under cultivation, of which about one half is stiff clay, and the other friable soil. Two sugar boilers have some part of their habitations built of brick. All the other places of abode are mere huts. The eastern part of this division belonged to Kamrup, the kingdom of

Bhogodotto, contemporary with Virat; and at a place called Hatisala is a large tank, near which it is said the elephants of this prince were kept.

Before the time of Bhogodotto lived Banraja, and it is said that he had a house in a large forest five or six miles from the Thanah. It has been a habitation like a common Zemindar's Kachary, that is to say, a space of 30 or 40 yards square, enclosed with a high mud wall, has contained eight or ten mud-walled huts, raised on platforms of mud, two or three feet from the ground. Traces of these may be distinctly observed near a tank, which has been dug out of very tenacious red clay. The place therefore might have served for the cowherds of Banraja, or it may have been the residence of some petty chief, who lived partly by his flocks, and partly by robbery, and who from his skill in archery, may have been called Banraja. There is nothing in its appearance to determine whether it went to decay 50 or 5000 years ago.

About two miles south and west from the Thanah is a ruin, which is said to be of very great antiquity, as it was for some time the abode of the goddess Sita, during her banishment from Ram. I have already mentioned the fables concerning this circumstance. The place is called Sita Kundo, and is a square mound of bricks surrounding a cavity, which may have been a small tank, or pond, and the mound may have been a considerable temple, or dwelling, by which the tank was surrounded, being perhaps 150 or 200 feet in diameter. There is nothing in its appearance to contradict the general tenour of the legend. On the banks of the Korotoya, east from this, lived the great poet and saint, Balmiki. This celebrated person bathed at Torpon Ghat, which has ever since been considered as a holy place, and is by far the most considerable resort of devout Hindus that exists in this division. On two days in the year people from twelve to twenty miles around, assemble to bathe at it. The only other places of religious worship belonging to the Hindus that have any peculiar holiness, are; 1st, Bhowanipoor, six miles north from the Thanah, where the head of a destructive female spirit (Sokti), is represented in stone. The temple is small, but much frequented. 2d, at the far end of the division towards the north-west, is an image of Sib, at Khambhumido, where annually ten or twelve thousand people assemble for ten days in spring, and

offer sacrifices of sheep, hogs, goats, and pigeons; and many shopkeepers attend to supply their wants. Near where Bhogodotto kept his elephants, a merchant of modern times has dug two tanks, and built a small temple, which is extremely carved both on its brick and wooden work, but it has no reputation. There is no Muhammedan place of worship constructed of brick, nor any of considerable celebrity.

In this division there are ten market-places, and two of them are marts from whence a considerable quantity of goods is exported. Only one other place contains a shop. Nawabgunj is a small town of about 100 families, and is by far the largest place in the division.

Ghoraghat—is the smallest in the division. It is situated on the Korotoya and Stishta, is about 21 miles long, by 12 wide, and is nearly of a triangular form. The Darogah and Munsuf reside at Ghoraghat, on one of the long sides of the triangle; but in a situation abundantly convenient. The division may contain about 140 square miles: of this 5 miles may be occupied by rivers, tanks, and water courses; 4 may be inundated, mostly low sandy banks (Choras), of which probably one half is occasionally cultivated; 18 may be a red clay soil; 42 a rich free mould; and 71 a stiff light-coloured clay. Setting aside the 9 miles occupied always or occasionally by water, 4 miles may be steep, or barren, or burial-places, roads, and markets; 10 may have been deserted, and not overgrown with wood; 12 may be in woods; and 105 may be fully occupied, 35 of a light soil, and 70 of a hard clay.

Although there is a resident proprietor of land, who has a decent estate, there is no brick house in this division, the present landholder choosing to give all his means to religious mendicants. Many houses however are built with mud walls, and those formed of the red clay are comfortable. About fifteen rich farmers have small brick mosques in their premises. The ruin said to be of the greatest antiquity in this district is that of Virat Raja's house, situated about nine miles south and west from Ghoraghat. It has evidently been a square fort. The ditch, although now mostly cultivated with rice, may be clearly traced, and has been 50 or 60 feet wide. The space enclosed has been about 600 yards square; part has been cultivated, but there are also many heaps of brick, covered with trees and bushes, and very irregularly placed. Low narrow

passages, like lanes, wind among these heaps, none of which is of a very considerable size. The bricks are small, and rudely formed, and no stones have been observed in this ruin. On the west of the fort, without the ditch, are some small heaps, like the remains of an Indian gateway. At some distance are larger heaps, probably the ruins of small temples. In the whole there is nothing to show that this work may not have belonged to some petty chief, who lived two or three centuries ago ; at the same time, there is nothing either about it to show that the work has not been of high and rude antiquity. Every Sunday, during the month Vaisakh, the Hindus assemble at Viratgor, where they pray and dine. There is no image at the place.

Ghoraghat is the place, where Virat Raja kept his horses, from which circumstance its name is derived. In the time of Nuzrut Khan, king of Gaur, it belonged to a certain Nilambor Raja, who resided at Kantadwar in the Rongpoor district, and had at it a fort surrounded by a forest. In the conquest of this infidel Nuzrut employed Ismael Gazi, a very holy man, as well as a good officer. He reduced all the neighbouring country, and took up his residence in the fort of Ghoraghat, which had formerly been constructed by the Hindus, and changed the name of the place into Nuzrutabad, after his master's title. He then cleared the adjacent woods, and a city arose, which was much encreased by the addition of Arungabad to the north, and Narungabad to the south. The principal increase seems to have been owing to the military station (Fauzdari) of the north-east frontier having been withdrawn from Ranggamati, after the unsuccessful attempt on Asam, and to the army having been stationed at Ghoraghat; for the governor in all late records is said to have been called Fauzar of Ranggamati. The person, who brought the troops from Ranggamati to Ghoraghat, is said to have been called Muhammed, and he was succeeded in his government by his son Zaynulabdin. Now from an inscription over a mosque, near the ruins of the governor's house, it appears, that Zaynulabdin the son of Muhammed Hoseyn son of Muhammed Saleh Izdanah was governor, A. H. 1153. This mosque is now deserted, no worship having been performed in it for 40 years; and it never has been large. The governor's house near this mosque is quite ruinous, although the

gate-way is pretty entire, and many walls are standing. These show, that the size has been considerable; but no traces remain either of elegance or splendour. The city, in the time of its greatness, extended 8 or 10 miles in length, and about two in width, and bricks and ruins may be traced in different parts, through that extent; but there is no reason to suppose that it was a close built town of these dimensions. On the contrary, there is every appearance of by far the greater part having been cultivated fields, with houses and gardens scattered among them.

Besides the mosque already-mentioned, there were several others, but all of very small dimensions, nor are there any traces of any great public buildings. The place suffered no particular misfortune, and has gone to decay, merely owing to the removal of the courts of justice, and of the army. The fort seems to have always been a sorry place, and the only remains are a ditch surrounding a space on the bank of the river, about a mile in length and half a mile in width. Part has been carried away by the river.

The most celebrated place in the town is the tomb of Ismael Gazi, placed in the south-east corner of the fort. He is much respected and feared, both by Hindus and Muhammedans, and a small canopy is still hung over his tomb, which is very ruinous. In the ruins of Nuzrubabad are very few stones, and I observe nothing to indicate that these have been taken from former ruins.

On the bank of the Stishta, north from the Thanah about seven miles, is an old fortress called Satparagor or the fort of seven centinels. It includes a considerable space, but is open towards the river, owing probably to the encroachments which this has made. Within the fort, and on a high mouldering bank of the river, is a heap of bricks covered with earth and bushes. It is called the king of Bengal's throne, and the river has opened the interior to view. There appears to have been a building of about 100 feet in diameter, which has been supported by small arches. The piers are very thick, and faced with brick, and contain within them many masses of stone, which have evidently been taken from more ancient ruins, as some of them have been ornamented with figures and carvings of various kinds, and which could not

have been intended for the place, that they now occupy. One of them contained traces of the human figure, and has therefore been taken from Hindu ruins. The natives at the place have no tradition concerning the fortress, except that it was a place where a Raja kept his flocks. I am inclined however to believe, that this place as well as Ghoraghat belonged to Raja Nilambor; for in some accounts that I received, I heard of a fort belonging to him near this place, and which was called Varo Paiker Gor, or the fortress of 12 soldiers, which is probably the same. About six miles easterly from the ruins of Virat Raja's house are said to be other ruins, which belonged to a Gokorno Raja, of whose history I could learn nothing.

Except Virat Raja's house, the only place that is considered as holy by the Hindus, is Rishighat on the Korotoya, a little below the Bengal king's throne. On a certain day in spring a number of people assemble there to bathe. Two small brick temples have been built by the two principal families, which lately possessed the adjacent lands; but they have never arisen to any celebrity. The market places in this division are 11 in number, of which Ghoraghat, Sahebgunj, Kengiyagunj, Gumanigunge, and Ranigunj, are marts for exportation, Ghoraghat is now almost reduced to the state, in which it may have been during the time of Raja Nilambor, being everywhere surrounded by woods, and tigers prowl in its streets every night. Still, however, it is probably the third place in the district, may contain 500 families, and carries on a good deal of trade.

KHYETLAL—is of an irregular form, somewhat approaching to a semicircle, about 22 miles from east to west, and 13 from north to south. The division contains about 160 square miles, and is the most fully occupied in the district. About eight miles are occupied by tanks, rivers, and water courses, the tanks being much more numerous than necessary; about four miles are inundated, and on that account are waste; 20 miles are of a fine loose soil, and 128 miles are of a hard clay. Setting aside the 12 miles occupied by water, and three miles occupied by roads, burial places, markets, and steep or sterile banks, and five miles that may be occasionally cultivated, the remainder or seven-

eighths of the whole are fully occupied, and of this 18 may be of a light soil, and 122 of a clay very stiff and hard, so that the Jak tree will not grow on it. There is no dwelling house of brick, nor any public edifice deserving of notice.

The only Hindu place of worship, that is much attended, is that of Siddheswori, where there are three small temples surrounded by a brick wall. One of them was dedicated to Sib, and covered with carved bricks. The image was stolen last year, and the only thing remarkable, although not unusual, is the extreme indecency used in the representation of a god and goddess. The place is endowed with 100 bigahs of land, which maintain four Brahmans, one Pujari, two servants (Sebayit), and one cook, with all their families. The goddess, as usual in Bengal, is worshipped by bloody sacrifices. A spot near the temple is considered as remarkably holy, and is called Siddho. It is supposed, that any person, who presumes to sit there, while he performs his devotions, will be deprived of reason. About 24 years ago this punishment was inflicted on a religious person (Mohonto), who imagined, that, by worshipping on the awful spot, he would be favoured with an actual vision of God. On the east side of the temple is a small tank, which contains excellent water, and in which no weeds grow. This is not attributed to the stiffness of the clay of it sides, nor to the sand containing springs at its bottom, but to the holiness of the place. The Pujari says, that the temple of Siddheswori was built about 200 years ago by a Boli Raja, who took the image from the heart of a large tree, now growing near the temple. In fact there are two wild fig-trees (Ficus religiosa and Bengalensis) growing near each other, and having bricks intermixed with their roots; and it is very probable, that these trees having grown from crevices in an old temple, had destroyed it and surrounded the ruins and image with their roots; and from among these the image may have been taken by the founder of the present building, which however has no appearance of being so ancient as the Pujari pretends.

The ruins of Boli Raja's house, and of a large city are a little to the east of the temple, and my Pandit alleges, that the priest is, as usual, an ignorant creature, which indeed seems to be true, as he knew nothing of the history of Boli Raja, one of the most common legends in Indian fable. The

Pandit thinks it probable, that the ruins belonged to Boli Raja, the father of Ban Raja, whose great works I have already described. In favour of the Pujari, however, I must state, that I heard it also reported in another part of the country, that one of the persons, who accompanied the Pal family in their stay here, was called Boli Raja. In the ruins I see nothing to decide the period, when this town was built, nor which Boli Raja occupied this country; for with regard to the time, when the first Boli lived, the legends allow ample scope; as he flourished and had wars with Krishno many thousand years ago, and is generally allowed to be still alive.

At Boligram, about eight miles north and east from Khyetlal, are shown the ruins of Boli Raja's abode, which consist of many heaps of bricks covered with earth and bushes, and traces of walls or roads, constructed of brick, and reaching from heap to heap, may be clearly distinguished. The bricks are of the usual size, and in some places the foundation of houses may be clearly traced. These heaps occupy a space of perhaps half a mile in diameter. East from this is a space of about a mile in diameter, which is raised very high by numerous tanks, and in some places contain bricks. This has in all probability been a town adjacent to the Raja's house.

There are only four market places in the district, and two shops. The largest place is Gujiya, which contains about 60 houses. Khyetlal, or the fair field, was formerly a large town, and the residence of a Zemindar, to whom the ancestor of the Dinajpoor family was a servant; but there are no remains of a town, except a quantity of bricks scattered about some tanks. Near it are some images of stone, which I was desired to visit, as they were rendered remarkable by having been cut asunder by the sword of Kalapahar, who, contrary to what one would have expected from such a violent action, was a very holy Brahman. A Muhammedan king, enraged at his sanctity, seized on him, and compelled him to eat beef, by which the good man lost caste, and was under the necessity of becoming a Muhammedan, as like most other persons he thought it better to have a bad religion than none at all. This conversion, however, he regretted very much, and as a punishment on the gods, for permitting such a profanation, he went about cutting their images in pieces. As this is a

story very generally told in Bengal, I expected to have found the images cut in a reasonable manner, through the middle, or at least deprived of their heads, as I had indeed been told; but Kalapahar appears here to have moderated his wrath, and the images seemed to have suffered no more, than might have been expected from the usual dilapidations of time, which carries off noses, fingers, or hands, that are made of brittle materials, and that project too far from support.

CHAPTER IV.

POPULATION, MANNER OF LIVING, WOMEN, FAMINES, DISEASES, EDUCATION, ETC.

On the important subject of the number of inhabitants I have little or nothing to offer that is satisfactory; for no enumeration has been made by the officers of police or revenue.* The only manner that I have of calculating the population is from the extent of cultivation, which is of course liable to great error. Two calculations may be founded on this basis. First it will appear in my account of the agriculture of this district, that about 480,000 ploughs are required, and one man is the usual allowance for each plough. The men employed in actual agriculture cannot therefore be less than 480,000, and these I imagine will be nearly one-fifth of their families, including old people and children, which will make the agricultural population, 2,400,000. Now considering the very imperfect state of agriculture, and the rudeness of the arts in this district, I do not think, that we can add more than a fourth of this number for all the other classes of society, especially as a quantity of grain is exported. This will give 3,000,000 for the total population, being about 558 persons for each square mile. Secondly, an estimate may be formed from the quantity of produce; and, rice being the chief food of the people, we may consider that alone. The total quantity of rough rice, after deducting seed, that I have calculated to be annually raised in this district is about 36,800,000 *mans*, which, according to the trials that I made, will give 27,650,000 *mans* of clean rice. Now I have supposed, that to the value of about 32,00,000 rs. of rice, or 4,400,000 *mans* are exported, and

* A list called Khana Shumari, containing a statement of the number of houses, families, tradesmen, castes, ploughs, looms, tanks, and other public works, religious and civil, that are under the care of the magistrate, is very commonly kept in native governments, and may in general be easily accomplished; I never heard that the people were alarmed by the execution.

there will remain for consumption 23,250,000 *mans* Calcutta weight. Then allowing ½ ser of 96 s. w. for each person daily, which is the calculation usually made in this district, this quantity of rice will feed more than 4,000,000 of people; considerable deductions, however, must be allowed for grain, that is waste, distilled, consumed by fire, eaten by cattle, and used in the arts; but still this population seems to be exaggerated, and the calculation founded on the number of ploughs seems more suitable to reality.

The most remarkable circumstance is, that with this overwhelming population there is a general complaint of a scarcity of workmen. The waste lands are attributed to a want of farmers; and common workmen or porters cannot be procured without the utmost difficulty. The difficulty in procuring farmers for waste lands, I imagine, is owing to the extreme poverty of the generality of that class of men, who have no farther means than will just enable them to cultivate land, that is in good condition, and from which they can receive an immediate and certain return; while the immense profit, which those, who have any capital, make by lending out their money to necessitous neighbours, prevents them from laying out money on improving the soil. The difficulty of procuring workmen and porters proceeds, in my opinion, chiefly from the want of skill and of proper implements to facilitate labour, so that the quantity, which individuals can perform, is exceedingly small, and almost every person is therefore engaged. It must, however, I am afraid, be allowed, that a want of energy and activity in the people contribute also to the same end.

That the population should be enormous is not wonderful; for there are not probably 1000 persons born in the district, who are in the army, or who have left it for service of any kind, or indeed who have at all emigrated, except scoundrels who are under the power of justice, or who have absconded from a fear of the law. These are indeed very numerous. The notions of both Hindus and Muhammedans inculcate, in the strongest manner, the duty of women to propagate the species, and I may venture to say, that the injunction is complied with, as far nearly as human nature will admit. A maiden at the age of puberty would be looked upon by the

natives with disgust and contempt; but few indeed are left in this humiliating situation. Besides the Muhammedan law, and that of three-fourths of the Hindus of this district allows widows to live in a kind of left-hand marriage, which, although not so honourable as proper matrimony, is far from being considered as sinful, or as excluding them from society. Accordingly, except loose women, I may safely venture to say, that in the whole district there are not 1000 women capable of fulfilling the duties of marriage, who are not either wives or concubines. Even among the pure Hindus, whose widows cannot marry, there are comparatively few persons of that description; for most of them are from other districts, and a large proportion of their widows, who do not burn, nor become loose, retire to their families.

The hardships imposed upon Hindu widows of rank, will be seen from many circumstances in the following account. They are stript of the numerous ornaments, which they enjoyed while children and wives, and are not even allowed to wear a red border to their dress, while they are compelled to sleep on the ground, exposed to insects and vermin, and to act as menial servants to the vain beauties who are decked out in the ornaments of which they have been deprived. Women of a high mind, often prefer the funeral pile, while many others submit with patience, especially in the families of landholders, where they have young sons totally incapable of managing their affairs; but it is not wonderful that many young women, conscious of their beauty, and thoughtless concerning its decay, scorn to submit to such harsh regulations. In fact, the rage for marriage is such, that a man who has not money sufficient to defray the expense of the ceremony, is every where willing to borrow it at any interest, and thus involves himself and offspring in difficulties, from which death alone can relieve them. In some divisions, I found that even common labourers sold their services for from 18 to 24 months, in order to raise at once a sum sufficient to enable them to marry; and and during that time the wife of course is left to provide for herself in the best manner she can. The master in such cases finds the servant in food and raiment. It may seem surprising in a country where procreation has such encouragement, and where perhaps there is less emigration than in any place

whatever, that the species should not multiply so fast as to render famine common, or that a single inch of ground should remain unoccupied.

I have already endeavoured to account for part of the lands remaining waste, from the poverty of the farmers, and the high profits on capital. With respect to the supply of food, I must state, that in the remembrance of man there have only been two famines, one in the Bengal year 1177, and one in the year 1194, the one 21 years, and the other 38 years ago. Both these were owing to very unfavourable seasons, when a great part of the crop failed; and in the latter it was only in some parts of this district, that any considerable number perished. In common years, or even in times of scarcity, such as the present year 1808, such excess of misery is unknown, and none, so far as I could learn, perish of hunger, on the contrary there is usually a great abundance of food.

There seem to be two principal means that keep the population within the bounds of subsistence, one is early marriage, and the other disease. In all the larger animals nearly resembling man, with whose manners we are well acquainted, such as the horse, ass, cow, or sheep, it has been found, that where the sexes have been allowed to unite, so soon as actuated by desire, the offspring was puny, and the operation uncertain: and I think we may safely extend the analogy to the human race. Some peculiar tribes of men in India, especially those in the western parts, and the bearers of the palanquins, are no doubt strong men; but it is not within my reach at present to form a rational conjecture concerning the reason why these differ from their countrymen. It suffices to say, that the inhabitants of Dinajpoor are a puny, weak, race, and are far from having numerous families, notwithstanding their early marriages, which on the woman's side almost always are consummated before the age of 13 years, and on the man's very commonly before the age of 16. In the families of landholders it is very uncommon to trace three successive generations; and in order to preserve the succession, recourse must be had to adoption, more usually after one regular succession than after a longer interval. These landholders are all married when children, and enjoy an abundant diet, comfortable dwellings, and plenty of warm clothing. It may indeed be with justice said, that the villages of Dinajpoor swarm with

children. This, however, I believe, does not proceed from the prolificness of individuals, but is the natural consequence of the people being unhealthy and short lived, which of course requires a large proportion of children to the number of adults. The moralist, who with a view of checking vice, should succeed in introducing early marriages, would, I am persuaded, produce great injury. The breed of men would not only degenerate, but vice would become more predominant. The grand check, however, to the excess of population is disease, which makes ample room, and fever annually sweeps away immense numbers. Although I do not think that any means would ever render Dinajpoor a country remarkably salubrious, yet I am persuaded that the excessive prevalence of fever is more owing to the want of stimulating diet, and of comfortable lodging and clothing, the consequence of poverty, than to any extraordinary degree of malignity in the air; and the great poverty of the natives is no doubt to be chiefly attributed to their improvidence, especially in forming early marriages, by which they have been involved in debt. The fevers are generally of the remitting kind, and terminate fatally in a few days; but more commonly they terminate in agues, or commence under that form, and are accompanied by enlargements of the spleen, and dropsical swellings, which carry off the sufferer after a long confinement. In fact, there are few, who escape with less confinement than one month in the year, and the whole are a sickly people.

The fever makes such ample havoc, that little room seems to be left for other diseases. The small pox, on the whole, does little injury, and the inoculation for that disease is pretty generally diffused. The inoculators are of both religions, and of all castes. One of them, a Hindu, gave the following account of his plan. Every year, so soon as the natural disease appears, which it usually does between the 10th of February and 12th of March, he begins to inoculate, and the season for inoculation continues until the 12th of May. Some years the spontaneous disease does not appear, and then he cannot operate, having no means of procuring matter. The inoculator in the course of his practice, remembers this having happened four times. When he has found a person under the natural disease, he opens the pustules with a rude iron bodkin, and collects the matter on some cotton wool. It will keep

three days and no longer. He uses it by moistening the cotton in water, and rubbing it on the skin, and then in that part he makes 8 or 10 punctures with a needle. Afterwards he rubs the impregnated cotton upon the punctures. Children are not inoculated under three years of age, but generally before ten. Those who are too young for inoculation, are carefully separated from those who undergo the operation, and are made to drink sugar and water, over which some incantations to Sitola have been performed by a Brahman. Previous to the operation, the child is washed, and afterwards is not allowed to eat fish, meat is nearly out of the question; but it seems to be allowed whatever else it chooses, except cakes or bread; and sugar-plantains, water-melons, cucumbers, and cold boiled rice, are recommended as the most proper diet. Two or three times a day it is washed in cold water. Should a fever accompany the eruption, the inoculator repeats a spell over some water, which he gives to the child to drink. He knows of no other remedy, and his skill is supposed to consist in the knowledge of a proper spell, which is a secret. Muhammedan inoculators, as well as Hindus, pretend to a knowledge of proper spells. Very few indeed of those who are inoculated die, even in the worst seasons; for although the disease appears naturally almost every year, there are certain seasons, once in ten or twelve, when it attacks more generally than others, and it then proves uncommonly fatal. In such seasons there dies perhaps one in a hundred of those who are inoculated. It is indeed chiefly in such seasons that the spontaneous disease proves fatal to the natives of Dinajpoor. The inoculators, when not employed in the line of their profession, cultivate the ground with their own hands. Their fee is from 1 ana to 1 rupee for each child, according to the circumstances of the parent, and they are by no means respected nor considered as on a footing with the practitioner of medicine. The vaccine inoculation is totally unknown to the natives, even by report. Measles appear occasionally, but are seldom fatal. Fluxes and choleras are common in spring, and rheumatisms in the cold weather; but these seldom kill. Syphilis is not uncommon. In and near Dinajpoor, indeed, it is supposed, that one person in four has this disease. Neither can psora nor ringworm be considered as very common, and they do not affect more perhaps than $\frac{1}{4}$ of the people, and these of the

lowest ranks, which in India must be considered as a very moderate proportion. The ringworm is the most prevalent. These diseases are common to the natives of Britain and India; but there are others peculiar in some measure to the latter, which deserve particular notice.

The kind of leprosy called Kushtho, or Mahavyadhi, that is, the great disease, is common, although not quite so prevalent as in some parts of Bengal. Some estimate the number affected at one in the hundred, while in other districts not more than one in 500 are supposed to suffer. I am doubtful whether or not it has yet been described by nosologists, or at least clearly distinguished from some diseases to which it has a strong resemblance. In this terrible disease the skin becomes wrinkled and discoloured, the joints of the hands and feet drop off, and the patient becomes a most loathsome object. It has no tendency to spontaneous cure, but continues to afflict the patient, until death. I am certain, that it is not infectious, so that in several points it seems to differ from the leprosy, to which the Jews were subject, and which, I believe is that called *Lepra Arabum* by nosologists. I have known women who had laboured under it for years, and who bore healthy children, which they suckled without communicating infection; and I am here assured that men labouring under it have for years lived with their wives, who have continued exempt. It is reckoned, however, hereditary, and I believe with justice; but it seldom makes its appearance before the age of puberty. By the natives here it is reckoned of two kinds: *Papoj*, which is inflicted on those who are great sinners, and which may be cured, if the gods please, by a pilgrimage to Baidyonath, near Janggira, on the Ganges; and *Kormoj*, which is inflicted on those who have been sinners in a former life. Were it not for the overbearing credulity of the natives, one might from thence infer, that the disease sometimes goes away spontaneously; but after much inquiry, I have not been able to learn of one case. It seems in Bengal to occupy the place of scrofula, being nearly as common as that malady is in the colder parts of Europe. In a native of India, on the contrary, I have never seen a clearly marked case of scrofula, and I believe that such have rarely, if ever, occurred. I know from repeated trials, that arsenic is no cure for this leprosy, as has been pretended; and I have also tried mercury

in vain. Neither had a full and nourishing diet any better effect in a fair trial, which I made by order of Lord Teignmouth, when that nobleman was Governor-General. Mr. Halliday, surgeon at Dinajpoor, informs me that he has had some success with the mineral acids. The leprosy, in which the skin of the natives becomes white (switri), is but rare, although at all times there are several examples of it in the district, and a similar state often probably takes place in the skins of Europeans, without being observed or considered as a disease. At least I have seen the skins of some Europeans that exactly resembled those of the Indians who are affected with this disorder.

The leprosy, accompanied by an enlargement of the leg, (elephantiasis), has been often considered as a mere symptom of the first mentioned disease. The natives, I believe with great justice, consider them as perfectly distinct, and the disease, which consists in a swelled leg, they call *god.* In Dinajpoor, it is not a rare disease, and in some divisions it was said that one person in 200 labours under it; but in others it is not so common. It generally commences in adults, and is accompanied by repeated attacks of pain and fever, which the natives say appear always either at the full or new moon. Each attack of fever is accompanied by an increase of swelling; but, when this has enlarged to a certain extent, the attacks of fever gradually become less and less violent, and produce less and less effect on the swelling, so that afterwards the patient enjoys good health, lives to the usual age, and suffers no inconvenience except from the size of the tumour. Both sexes are subject to the three diseases that have been last mentioned.

The women in a few parts of this district, chiefly near the Punabhoba and Atreyi rivers, are subject to the indolent swelling in the throat, which seems to be exactly the same with the Goitre of the Alps. By the natives it is called Gologondo, and its progress is nearly the same with that of the *god;* but the fever and pain are never so considerable, and the former is often not perceptible; while it is increasing, however, there are always slight paroxyms of pain. No remedy is known for either of these diseases.

The male sex in this district, as well as in other parts of India, are subject to a peculiar swelling. Its paroxysms of increase are accompanied by fever and pain, which last three

or four days, and are said always to appear at full or new moon. It seldom attacks persons under 20 years of age, and usually commences only on one side. In this stage it is called Eksira, and sometimes is cured; but when both sides are affected, especially after a few paroxysms, and after it has acquired the name of Korondo, no remedy is known. After some time the paroxysms of pain and fever entirely cease, and the swelling becomes stationary; but it is extremely inconvenient from its size, and frequently destroys the powers of generation. It is not however, liable to degenerate into cancer, nor to affect the general health. The usual size is that of a man's head, but it is often much larger. The natives consider these three last diseases as species of the same Genus, and I believe with perfect accuracy. This last species is not so common in Dinajpoor as in the southern parts of Bengal; but still many are affected.

Two frebrile diseases, accompanied by local inflammation, are also exceedingly common, but are not epidemic. The one is by the natives called Sannipatik, and is a swelling and pain of the submaxillary glands accompanied by fever. It frequently attacks the same person at different times in the course of his life. This disease is very common in Dinajpoor, and Mr. Halliday considers it as the same with the mumps (Angina parotidoea), and treats it with emetics. I cannot say, that I am entirely satisfied concerning the identity of the two diseases. Many of my followers suffered from it, and some more than once, but it was a mild complaint, without any symptom that required so active a medicine as an emetic, otherwise I should have tried the plan recommended by Mr. Halliday.

The other disease is very common in every part of India, and by the natives is called Nasdor Nakra. It is a considerable fever accompanied by much drowsiness and by general pains, especially in the neck and shoulders. The inner membrane of the nose is considered by the natives as the seat of the disorder; but there is no considerable uneasiness in that member. The membrane is however turgid with blood. The cure applied by the natives is to draw blood from the part by thrusting a sharp-edged grass into the nose. So far as I have had occasion to observe, the disease would readily terminate in health without assistance; some persons how-

ever pretend to have great skill in knowing the proper time for introducing the grass, and say, that then the disease is ripe.

Condition and manner of living.—In order to give the most correct view of the manner in which the people live, in respect to food, drink, clothing and habitation; I have, by means of Ramjoy, my native assistant, made out an estimate of the the usual expense incurred by six families of different ranks, in the town of Dinajpoor, and I am persuaded, that this will prove more satisfactory than any desultory observations that could be made on the subject; but I shall now offer a few explanations and remarks. The estimate will be found in the Appendix.

Ramjoy has unfortunately made his choice entirely from among the Hindus, with whom as a Brahman, he was naturally most connected; but in this district, as I shall afterwards mention, they are of less importance than the Moslems. The difference however, in the manner of living between the two people, is not very considerable in this district, and shall be pointed out under each head. From the first class of people I have excluded the great landholders, very few of whom reside in this district. These live in a much superior manner, and maintain from 50 to 150 domestics of various kinds, from which an estimate may be formed of their manner of living.

The first class consists of the principal native officers of government, of small landholders, of the chief officers of the great landholders, of the principal proprietors of free estates, and of a few merchants and principal manufactures. The greater part of these are natives of other districts, and have not brought their families with them, it being considered as improper for a Hindu to take his wife from home. The whole almost are Hindus. The second class are also almost entirely Hindus, and consists of the second class of native officers of government, such as Darogahs and Moonsifs (although many of these live like the first class), and of the agents of smaller Zemindars, or the inferior agents of the great landholders, of petty landholders, and of a considerable number of merchants, especially sugar manufacturers, who are almost the only persons belonging to this class, that are natives of the district. The third class consists of the petty officers of government and of landholders, being chiefly the persons employed to keep accounts (Mohurer), and to command the

men, who enforce the orders of the magistrate or landholder (Jumadar Mirdha), of the agents of the great merchants in the south, of many petty traders and manufacturers, who are natives of this district; and of rich farmers, mostly Muhammedans, who are the only persons of the class that possess any real wealth. The fourth class consists of easy farmers, who have three or four ploughs; of artificers in easy circumstances, and of the principal domestics of rich people. The fifth class contains farmers, who have one or two ploughs; tradesmen in tolerable circumstances, such as oilmen who have one or two mills, or weavers, who have one or two looms; and petty shopkeepers. The sixth class contains those who cultivate for a share of the produce, common labourers, and low artificers—such as basket-makers, washermen, the greater part of fishers, carpenters, &c.

In my account of the architecture of the natives, I shall give some further detail concerning their houses. In the meantime I may state, that it is not the usual custom of Bengal to build one house with a number of different apartments sufficient for the purposes of the family; but, except the great, the natives in general build a separate house or hut for each purpose. The huts collectively sufficient for the accommodation of a family are usually surrounded by a common fence, and are called Vati or Vari. According to their structure they are called Banggola, Chauyari, or Dalan, as will be afterwards explained. Their comfort depends much on the nature of their materials. Except in the few brick houses, built after the Muhammedan or European fashion, thatched roofs are the only ones known in this district, and no doubt, in respect of excluding both heat and cold, are more comfortable than those covered with tiles; but they harbour vermin, especially snakes, and are more liable to fire. The general use of tiled roofs cannot however be proposed in the present state of capital; although such roofs, even under existing circumstances, might with great advantage be more numerous than they are at present. The granaries of this district, which are exceedingly extensive, and on which a great part of Moorshedabad, Calcutta and the intermediate towns depends for a daily supply of food, are exposed to the danger of fire in a manner with which I was often shocked; especially, as when I visited the country, scarcity was severely felt, and

famine was even to be apprehended. The merchants to whom these granaries belong, are abundantly able to defray the expense of tiled roofs; but I am persuaded will never employ them without compulsion. Their agents and other traders have a carelessness and indifference about fire, that is quite astonishing, and seem rather to court it; for I observed in several marts, that not only the granaries, but even their houses were built entirely of straw or reeds, when the hut of every labourer within miles of them had mud walls.

In many parts of the country, the meanest huts have walls of clay, which are very much superior in comfort to those made of hurdles, especially in cold weather; but such are not attainable in the parts of the country, where the soil is loose; and in a climate of the most excessive moisture, even the huts that have mud walls, are very damp and unhealthy from their earthern floors. It is only where the ruins of Gaur or Paruya afford bricks, that in the present state of things, even the higher ranks can afford houses of that material. Until the people shall have procured more wealth, one of the greatest improvements on their condition, would be to introduce huts raised on posts, which are infinitely less liable to dampness and to vermin than those of Bengal.

Farmers have in general larger and better houses than people living in towns, their respective situations in life being taken into consideration. Thus a rich farmer, whom I have placed in the third rank, will have 12 or 14 huts in his premises or Vari; for he has many servants, and in general several brothers, with their wives and children, live together: and if a Muhammedan, as most of the richer farmers are, he generally has in his premises a small brick mosque, which gives his abode a respectable appearance. His expense, however, under this head is very inconsiderable, as he has all the materials at hand, and he and his servants build and repair his dwelling, at intervals of labour, which would otherwise be unemployed. The same may be said of the common labourer in the country, into an estimate of whose expense the cost of a house can scarcely enter.

I suspect, that the hut for receiving company is a Muhammedan innovation, and has been introduced when the example or command of these haughty conquerors rendered it necessary to secrete the women. This practice is not common

in the south of India, where the manners of the Hindus are less altered, and the name universally used for this apartment (Baitokkhana) is foreign. The furniture of the Muhammedans and Hindus is nearly the same, only the former require less apparatus for their worship, and the lower classes require nothing except a knife, a mat, a bit of sackcloth, a Hungka, and some earthen pots and gourds for vessels; the whole not exceeding the value of one rupee. The sofa made of wood, the carpets and quilts seem to have been introduced by the Muhammedans, and chairs seem to have been introduced by Europeans. The Hindus of rank originally, I believe, covered their floor of ceremony with a plain white sheet, and sat on mats, some of them very fine. The low stools (Piri), on which they sit on their heels, while at meals, are merely intended to keep them from the mud or dust. By far the greater part of the people sleep on the ground on sackcloth or mats, and cover themselves with sackcloth or Megili. The most valuable part of their furniture consists of copper or brass vessels; for they have no plate. For eating anything acid, such as most of their curries, in place of copper vessels, which would be dangerous, they use coarse plates and cups made of potstone, which absorb oil and grease, and cannot be cleaned. From a principle of what they call purity, china or queen's-ware are rejected, as a Hindu considers it as impure to use any vessel of potter's-ware more than once.

The jewels and ornaments worn by Muhammedans are quite different from those used by the Hindus. In general the Muhammedans use fewer ornaments of gold and silver than the Hindus, and are fonder of pearls and precious stones. In place of the brass or shell ornaments used by the lower Hindus, the lower Muhammedan women use rings of tin or lac. Both people, like other nations, are subject to the influence of fashion; although these do not travel with the same velocity that they do in Europe. For instance, the fashionable lady of Dinajpoor cannot endure a Maduli of that place, but procures hers from Calcutta. The former is made in the shape of the Mridonggo, while the latter imitates in the Dholona, another instrument of noise. At Calcutta again the Maduli, in form of a Dholona, has been completely exploded for at least 20 years; and the sable belles of that city wear none but those made of pearls or jewels, after the

fashion of Delhi. Here the fashion takes 20 years to reach four or five hundred miles.

Both Hindu and Muhammedan women colour their eyelids with lamp-black. The dress of the Hindu men of rank has become nearly the same with that of the Muhammedans, who did not allow any officer employed by them to appear at their levees (Durbars) except in proper dress. At home, however, the Hindu men, and on all occasions their women, retain almost entirely their native dress, which consists of various pieces of cloth wrapped round them, without having been sown together in any form, and only kept in their place by having their ends thrust under the folds. The needle seems indeed to have been totally unknown to the Hindus, and I have not been able to learn any Hindu word for sowing except that used to express passing the shuttle in the act of weaving. The wealthy Muhammedan farmers dress very poorly, and on this article many of them do not expend 10 rs. a year for their whole family. The poorer Muhammedans here have adopted almost entirely the Hindu nakedness, more from necessity than inclination; in fact, the lower classes are exceedingly ill clothed night and day, and suffer much from cold, both in the cold season and when it rains. On this account it would be very useful to introduce the manufacture of coarse blankets, common in many parts of India, especially if the breed of sheep could be somewhat increased. The dress in the country of a common labourer does not exceed 9 anas a year, with as much for that of his wife. Many of the lower Hindu women, who are mostly of tribes from the eastern parts of Bengal, use a dress nearly resembling that of the Burmas, that is a square piece of cloth placed round the back, and folded across the breast, where it is secured by thrusting the corners under the fold, which comes over the bosom. This dress is usually made of a coarse cloth called Megili. It is only the two higher classes that make a common use of bleached linen; the third uses it only on high occasions.

The food of the people is in general superior to their lodging, furniture, and clothing.* Few are distressed by hunger; and, although in general their food is not of a nature sufficiently nourishing, it is abundant. The higher classes have plenty of fish, vegetables and milk, and might procure meat;

* See Appendix for the various estimates.—[Ed.]

for they are not restrained from eating the flesh of sacrifices; yet in general they abstain from this indulgence, which is always considered as disgraceful. The large allowance for oil made in the estimate, includes what is used for anointing the skin. This practice here is confined to the higher ranks. The allowance of oil in the estimate, in all ranks, includes that for the lamp. The third class burn a light two or three hours, the fourth perhaps one hour, and the lowest only for a very short time, to enable them to eat after the labours of the day are over, or early in the morning, when the female rises before dawn to the hard labour of beating rice.

The third rank, being mostly Muhammedans or Hindus of low caste, although their allowance of luxuries, such as sugar, spices and butter, be small, yet often enjoy poultry and meat, especially that of sheep and goats. So far as I could learn, the country benefits little in respect to beef, from having few Hindus; and no beeves are killed except at Dinajpoor under the protection of the magistrate, and at Peruya under the protection of the Muhammedan saints, who are its proprietors. By far the greatest part of the proprietors of land, of their agents, and of the officers of government are Hindus, exert the whole of their influence to save the sacred beasts, and are completely successful. The poorer farmers very seldom taste milk, and their supply of fish is very scanty; but, if Muhammedans, they occasionally have a fowl, pigeon, kid or lamb; and, if Hindus, they have sometimes a kid or duck, and in some parts they can catch deer or wild hogs. Their supply of oil and salt is scanty, and foreign spiceries, even pepper, are totally unknown to them; nor can they in general procure sugar to smoke with tobacco.

The lowest class often want betle and salt, and in place of the latter use the ashes of various plants. The nature of this saline substance (Khyar) I have not examined, but suspect that it contains many other salts besides the carbonate of potass. The plants most commonly used in this district are as follow: the root of the plantain tree or Musa; the stems of two species of Sinapis, the Turi and Sorisha, of which no account has been published in botanical systems; and several plants that float on water, and by the natives are called Pana, such as the *Pistia stratiotes*, the *Salvinia natans*, and another species of the same genus, of which I find no account pub-

lished. I have had no opportunity of ascertaining whether or not there exists any difference in the qualities of these ashes. Their supply of fish, oil, and vegetables is very scanty. The only fish that they procure is what they can catch in ditches; and the vegetables that they use are either wild ones collected by their children, or a few beans and cucurbitaceous plants that cover the roofs of their huts. The greatest deprivation, however, which they suffer is the scarcity of tobacco. Modest women do not smoke, but they chew tobacco with betle; and men of all ranks delight in nothing so much as in smoking. The lowest class are unable to purchase it; but those who employ them to work, knowing its invigorating effects, supply their wants, otherwise their work would advance slowly. Some of the lowest Hindus find a valuable addition to their nourishment in pork, which they have sense enough to rear, notwithstanding the contempt of their neighbours, and which is secured to their enjoyment more by the silliness than by the moderation of their superiors. On the whole, $\frac{1}{2}$ ser of rice weighing 48 s. rs., or rather less than $1\frac{1}{4}$ pound avoirdupois (1,231) is considered as sufficient for the daily sustenance of each person in a family, young and old; to which, if there is plenty of salt and oil, with pulse or other vegetables, rather to convey down the latter than to afford nourishment, the person is considered as living on a full diet. The only drink is water, milk is scarce even with the third rank, and distilled or fermented liquors cannot be considered as entering into the diet of the natives, and, whenever taken, are used for the purpose of the most beastly inebriation.

Many persons, I am aware, consider that vegetable food highly seasoned with capsicum, and water for drink, is the diet best adapted for a warm climate; but I am persuaded that they are mistaken, and have been misled by observing the sickness of newly arrived troops or seamen, which is too often preceded by excess and intemperance. Whoever, I think, has travelled much with natives, and been witness to the weakness of their constitutions in resisting the changes of air or water, will agree with me in saying, that those who enjoy a diet, which includes animal food and strong liquors in moderate quantities, are best able to resist the influence of unhealthy climates and the sudden changes of air.

From some Muhammed has received praise for his having prohibited strong liquors; while others, wishing to detract from this merit, have stated, that in warm climates the prohibition is absolutely necessary, as the natives by intoxication are thrown into an ungovernable fury. This seems to me to be one of the usual exaggerations of the effects of climate. Nothing can in general be quieter than a drunken native. It is seldom or never that he indulges in that drunken conviviality, which is apt to degenerate into quarrels. The ferocity with which the Malays, in certain cases, commit assassination, has been attributed to the effects of intoxication in a warm climate: but I believe unjustly. The action is premeditated, and arises from a savage principle of honour; and recourse is had to intoxication to give courage in the perpetration of a deed that is followed by the most dreadful punishment. In different parts of India the juice of various palms affords a fermented liquor, which enters largely into the diet of many of the inhabitants; and I am persuaded might, in most parts, become the common beverage in place of the very indifferent water that is now used. Although I dislike this liquor, yet I believe, that by habit every one would acquire a fondness for it, just as almost every one acquires a liking to beer; and I have no doubt but that its use would prove highly beneficial and comfortable to the people. Those called moralists, with their usual eagerness to appear uncommonly virtuous, are apt to extend their declamation from the abuse to the moderate enjoyment of good things; but the present state of morals in Dinajpoor, under a water regimen, seems very little favourable to the wisdom of those who wish to deprive the people of the use of strong drink. Distilled spirits, I confess, are dangerous, as they readily lead to excess; yet in climates that do not produce wine, their prohibition would, I have no doubt, prove injurious to the health and vigour of the people. At any rate the palms of India produce a liquor not liable to this objection, and I think it is much to be regretted that the inhabitants of Dinajpoor do not use it.

The most common fuel used for cooking is bamboo. The poor, however, and many farmers collect cow-dung, and mix it with the husks of rice; but this kind of fuel is not much valued in this district. Except near Ghoraghat and Maldeh, where there are many bushes, wood is seldom used as fuel;

for the cutting a tree to pieces for that purpose is attended with too much trouble and expense. The bamboo is considered by many as an unwholesome fuel, and part of the sickliness of the district is attributed to its common use; but this is probably an error. Reeds in some parts constitute the fuel, especially that used in manufacturies.

The persons mentioned as domestics are free men, there being very few slaves in this district. They are hired from month to month, and as will be perceived have miserable wages, and are very poorly clothed. Their employments are as follow. They wash their master's clothes by dipping them in cold water, beating them on a stone a little, and then dry them; for the washerman cleans the clothes once only after eight or ten wearings. They bring water, clean the house furniture and cooking utensils; they bring provisions, firewood and pots from the market; they assist their master to cook, for in general a man of rank passes a considerable part of his time in this office; they go messages; they dress the Hungka, or instrument for smoking tobacco; they dig and weed the garden; they clean and feed the cattle; and in fact do almost everything that they are desired. The rules which the servants of Europeans have established, and by which they pretend that they will lose caste by performing more than one business, seem therefore to be a mere invention of their own.

Except great landholders very few keep running footmen, and the only travelling carriages in the district, belonging to natives, are 10 or 12 covered carts drawn by oxen, which belong to Muhammedans at Dinajpoor. Many persons even of the second class keep palanquins, but except landholders and their chief agents, few or none have regular sets of bearers, nor people to carry torches, but hire them when wanted. The horses most commonly kept by persons of rank are ponies from Bootan, which are commonly pyebald, and are called Tanggons. From the estimate of the expense bestowed on keeping them (3 rs. a month, or ½ of what a European would allow,) some notion may be formed of their condition. Much work is not however exacted from them; and many, who are afraid to ride, keep them from ostentation; the pony has fine trappings, and his master either walks or goes in a palanquin, while the horse is led after him. People of the third

rank usually have small ponies of the country breed, on which they either ride to market, or at least walk there before the horse. The people, indeed, are less addicted to horsemanship than almost any that I know. The most striking circumstance in the domestic economy of the people of Dinajpoor is the want or scarcity of female servants, even in houses of distinction. This does not proceed from the want of female delicacy in the women of rank; but from the difficulty of procuring women that will serve, as the whole almost are married.

As there is no provision for the indigent, except casual charity, the number of poor, that is supported by begging, is not considerable, and does not, from all I could learn, amount to more than 3 persons in 1000. The persons, who beg on account of their poverty, are in general very proper objects of charity, lame, blind, and infirm persons, or old women, who are destitute of friends or support; and it was chiefly near the capital, that I heard complaints of idle vagrants. In justice to the people I must say, that they are charitable, and that in general objects of charity seem to receive a sufficiency to support nature. During the great famine, which happened in the Bengal year 1177, a merchant of this district, named Gopi Mondol, gave 50,000 rs. to the poor. The beggars are certainly very ill clothed, and suffer much from the weather; but so do the labouring poor, and to make the condition of the beggar better than that of the labourer, although sometimes practised in England, has not yet been sanctioned in India. The necessitous beggars of Dinajpoor go from house to house, where they procure a sufficient quantity of food; and some good natured person generally erects a miserable hut for them near a market place; but many are under the necessity of seeking for shelter under trees in temples or in ruins. They are generally very well behaved, and are never very clamorous, except when they find a person of some rank, whom they solicit for a piece of cloth. Their usual resources seem to supply them abundantly with food; for I observed, that they often rejected two anas, or two days' hire of a labouring man, and they were seldom satisfied, unless they obtained a piece of cloth to shelter them from the weather. I saw no considerable number anywhere except at Maldeh, although the year

was scarce, and rice had risen above the usual price in the proportion of 45 to 35. Maldeh, like all other manufacturing places, is subject to occasional stagnations of trade, and these are always accompanied with a misery, that is unknown in agricultural districts.

Among the beggars I have not included the religious mendicants belonging to both sects, whose number and impudence surpass all imaginable bounds. The people I have said are charitable, they are remarkably sober, and affectionate and kind to their relations. They are also hospitable to people of their own caste, but to no others. Their chief faults seem to be prevarication, an insatiable rapacity in the higher classes, and a total want of inclination to pay what they owe in the lower, with a strong inclination in all to theft and robbery; in the perpetration of which they are cruel and bloody. Their credulity being a prominent feature will unavoidably present itself often in the course of my report, and with their other faults may be chiefly attributed to their ignorance, which will be apparent from a view of the state of education.

EDUCATION.—*Schools, and Languages.*—The first rudiments of education are usually given, both by Hindus and Muhammedans, in small schools called Pathsals, under the tuition of teachers called Gurus, who may be of any caste or religion, who are poorly rewarded, who are little respected, and who are quite different from the proper Guru or teacher of religion. There is no public provision for these useful members of society, and they depend entirely on their scholars for a subsistence. In the towns of Dinajpoor and Maldeh, indeed, the average number of scholars to each master may be about 20, and the fees are from 4 to 8 anas a month, according to the progress the children have made; on an average the fees may be 6 anas for each, or 7½ rs. a month for 20 scholars, which in this district is a decent income; but in country places the average number of scholars does not exceed 12, and the fees are from 1 to 4 anas a month, or on an average 2½, so that the total average income is only 1 rupee 14 anas.

Even these small fees are far beyond the reach of the bulk of the people, and the number of Pathsals is inconsiderable, as will appear from the Appendix, so that were not

many parents at the pains to instruct their own children, very few would be able to read and write. Even with this assistance, I am persuaded, that not more than one-sixteenth of the men born in this district acquire these accomplishments. Women are totally out of the question. My inquiries on that subject were always answered in the negative, and generally produced a smile of contempt.

Children usually go to school at five years of age, and are instructed to read and write at the same time, which seems to be an excellent method. They begin with tracing the letters on the floor with a pencil of steatite (Ram Khori), beginning with the consonants, and afterwards joining the vowels so as to form syllables. In five or six months they are thus able to read and write. They then begin to write cyphers on palmira or plantain leaves with a reed and ink, and at the same time they learn numeration, and the sub-divisions of weights and measures. The subdivisions of time belong to astronomy or rather astrology. This occupies 18 months. They then begin to write on paper, to learn to keep accounts, and at the same time to multiply, divide and subtract, with the rule of practice, in which the usual Indian arithmetic consists. Accounts and arithmetic are divided into two kinds, one for agricultural, and the other for commercial affairs; where both are to be learned, the former is the one usually taught first; but very few of the natives of this district ever acquire that knowledge, or are able to tell how many bigahs, or fractions, a rectangled parellelogram of a given length and width contains; for the Hindu geometry, so far as is known in ordinary practice, extends no farther. Practical surveyors have no means of ascertaining the extent of irregular figures, but by reducing them to rectangled parellelograms, in which they are guided merely by a rough estimation, or what is called the eye; while, even in measuring parallelograms, they are destitute of any instrument that can ascertain whether or not all the angles are equal. In general the parents of this country are contented with instructing their children in mercantile accounts, that is in being able to calculate, how much of any article may at a certain rate be procured for a certain number of rupees; and in keeping a very full day or waste book, in which every transaction is carefully recorded, and to which is added a kind of ledger, in which the trans-

actions with each person are separately detailed; their books do not admit of a regular balance, like what is called the Italian method. It is only the arithmetic, commercial and agricultural, that is taught at Pathsals, and the application to mensuration, and to the keeping of books, either of a merchant or landholder, are acquired in some office or shop, into which the lad enters as an assistant, and where he also learns the style and manner of correspondence. Boys are fitted for entering into an office as assistants, when from 8 to 10 years of age, according to their industry.

The use of the sharp iron style, for writing on bark or leaves, although the original manner of Hindu writing has been entirely relinquished, and a pen made of reed or bamboo and ink, introduced by Muhammedans, are universally employed, even in writing on the palmira leaf, which is still often used in works of value, as being more durable than paper.

The education in common schools is not only defective from not being sufficiently diffused, but is liable to still greater objections. Nothing whatever is taught in these schools, except the mere reading and writing of the common language of the country or Opobhasha of Bengal, together with arithmetic. The youth read no book in which any moral doctrines, or any liberal knowledge is contained, so that their education being confined entirely to accounts, tends rather to narrow the mind, to confine its attention to sordid gain, and low cunning, than to improve the heart and enlarge the understanding. Indeed no fit books, so far as I can learn, exist in the language commonly spoken in Bengal; neither does it possess any grammar or dictionary. I cannot indeed learn, that any composition in the proper language of Bengal has ever been committed to writing, except some love songs, common accounts, and letters. The same may, I believe, be extended to all the spoken languages (Opobhashas) of India, and is to be lamented as a great cause of ignorance and error.

The Prakrito or polite language of Bengal, like those of other Indian nations, may be considered as a dead language, or in the same light as Latin was in Europe about 200 years ago. All persons of a liberal education are acquainted with it, and among them it is the usual means of correspondence, and the language of ordinary composition. According to the

best information which I can obtain, the Prakrito of Bengal, like those of other Indian nations, is composed almost entirely of Sanskrita words, with the inflexions and syntax of the vulgar language. Indeed the best informed Brahmans of the south, with whom I conversed, considered the Prakrito rather as one of the styles of writing in the sacred language, than as a distinct tongue. It is however commonly called the language of women and children; but this can only be taken in the sense of the Brahmans of the south, namely, that in books written in the sacred tongue this style is used by the women and children that are introduced; for in no part of India is the Prakrito the common language of the country. In every part, however, all well educated men can speak it, and in some parts of Bengal even the women of Pandits, and other high personages are instructed in its oral use; for in these parts writing is a very rare female accomplishment. Indeed its practice is severely reprobrated in the sex. This language is not taught in schools, nor so far as I can learn does it possess a written grammar, nor a dictionary, except those composed by Europeans; but people of a certain rank and education acquire it by conversation and reading. Of course it is both written and spoken with little exactitude, especially by those who have had no instruction in Sanskrita grammar, such as merchants, religious mendicants and the officers of revenue and police. It is to be much regretted, that even in this dialect there are scarcely any books, that can communicate valuable instruction to youth. The usual compositions in Prakrito are songs, hymns and translations of some of the more celebrated poems; the whole, especially the latter, although probably possessing considerable poetical merit, so filled with monstrous fables, and marvellous stories, that those who read nothing else are disposed to believe every thing that is contrary to the usual laws by which the world is governed; and lose all taste for the plain dictates of common sense. There are however, in the Prakrito of Bengal, as well as in that of other Indian nations, some few histories of the families of chiefs that have lived of late years, strongly however disfigured by the taste for the marvellous, which the usual reading of the people inspires. A system of arithmetic also, better than the common, and which facilitates the more difficult calculations in revenue accounts, has long ago been compiled in the Prakrito lan-

guage of Bengal by Subhongkor, a Kaystho of Nodiya. This book is called the Arya or Arjya of Subhonkor, and is no doubt of great utility; but its tendency, like that of the common instruction given in the lower schools, is certainly not of a liberal nature. The knowledge however communicated through the medium of the Prakrito is better than none; and it is therefore to be lamented, that it has made little way into the district of Dinajpoor, and is chiefly confined to those who have been born in Maldeh or its vicinity, to the few Pandits, that are thinly scattered through the country, and to some of the religious mendicants. Probably one in the thousand may understand it; but men qualified to hold any office superior to a common clerk (Mohurer) cannot be found in the district, which is of course invaded by strangers, from the principal officers of law to the agent of the Calcutta merchant, most of them rapacious as kites, and eager to accumulate fortune, in order to be able to retire to their native country.

The Prakritos of India being the only dialects, except Sanskrita, in which any books have been composed, many have been led to consider them as the proper dialects of the different nations by which that country is occupied, and on this basis has it probably been, that the Sanskrita has been considered as the source from which all Indian languages have been derived. Every opobhasha no doubt, contains many Sanskrita words, perhaps as many as English does words derived from the Latin; but still, so far as I can learn, each has a copious vocabulary of words peculiar to itself; nor can I hope for any considerable improvement in the education of Indian youth, until each popular language has obtained some books fitted to render the vulgar wiser and better. I have no doubt, but that they would be read with avidity; yet great difficulty would arise in the composition. The taste of both Hindus and Muhammedans is so pedantic, so fond of learned ornaments and of the marvellous, that it would be difficult to find a person qualified to write plain common sense; besides the vulgar are held in such contempt by the Brahmans, that it would be difficult to find a man of any education who would become their instructor. Translations from the European languages, or compositions by Europeans, would be attended

with still greater difficulty; as it would be almost impossible to separate them from the idea of religious innovation, which both sects watch with anxious terror. The books wanted for this district should be composed by Muhammedans, as the bulk of the people, and those most in want of instruction are of that faith; and persons abundantly willing to compose them might readily be procured at Calcutta, where the exuberance of their erudition and imagination might be curtailed according to the narrow measure of European criticism.

Notwithstanding Muhammedans form the greater part of the population of this district, the Indian dialect adopted by that people, although pretty generally understood, is not the native language of the vulgar, who have universally either adopted or never relinquished the opobhashȁ of Bengal. Neither is the Hindustani dialect taught in any school, nor is the Persian character usually employed to write it in any of the Pathsals. The people of higher rank, however, commonly teach this to their children, who also learn to speak a higher style, which may be compared to the Prakrito of the Hindus, and consists almost as entirely of Arabic and Persian, as the other does of Sanskrita.

The number of Muktub Khanas, or schools where Persian literature is taught, as will appear from the general statistical table, in appendix, is very small. They are nearly as much frequented by Hindus as by Muhammedans, for the Persian language is considered as a necessary accomplishment for every gentleman, and it is absolutely necessary for those who wish to acquire fortune in the courts of law. The number of pupils however in this district is very small, and most of the people of any rank or wealth are instructed by private tutors, who are procurable on the most moderate terms. There is reason however to fear, that their learning is not extensive, nor their taste correct; and, so far as I could learn, the studies usually pursued are forms for correspondence, or processes of law, to which are added the most improbable legendary tales that can be procured. There is no school in which Arabic, or the sciences of the Muhammedans are taught; and although some of the priests (Molnahs) can read the portions of the koran, that are appropriated for certain ceremonies, I heard a general complaint from the Kazis, that

few understand a single word of that language; and that the greater part had merely learned the passages by rote, so as to enable them to perform the ceremonies.

I do not profess to be able to form a proper estimate of the value of the science, which is veiled in the Sanskrita language, but there can be no doubt, that it far excels that which is divulged in the Prakrito. Owing however, to the institutions, by which it has been guarded, and confined to the sacred tribe, its utility to the Hindu nations may not only be doubted, but it may perhaps be maintained, that on the whole it has tended to increase the darkness. There can be no doubt, however, that those who possess it enjoy very considerable advantages over their countrymen; and the Brahmans generally speaking have an intelligence and acuteness far beyond other Hindus. I am further inclined to think, that they are subject to many fewer vices, and that those persons will be found to approach nearest their good qualities, who are admitted even to the porch of science. The manner in which the Hindu youths of this district are instructed in the higher parts of science is not judicious, and shall be now mentioned.

Among the Brahmans who have kept themselves pure and uncontaminated by service, and who in this country are called Pandits, as in the south they are called Vaidiks, are some men of learning called Odhyapoks, who undertake the instruction of from three to six pupils, not only without fee or reward, but who even in general supply their scholars with food and lodging, and often with clothing, during the whole course of their studies, which on such a system must be very long. Every Odhyapok must be a Pandit, but every Pandit is not an Odhyapok; a man may acquire every science without choosing to teach it, and this is necessary to obtain the title, which, both from the utility and liberality of the professors, is deservedly held in the highest respect. Most of the Odhyapoks possess lands, which enable them to provide for their own subsistence, as well as that of their pupils, and they receive charity from all Hindus, of any distinction. There is, however, no necessity for a person who holds these lands, to instruct youth; and, when the celebrity of an Odhyapok has procured large grants of lands, his heirs, although they continue to enjoy the estate, are in no ways bound to teach, and may for ever continue to enjoy the high title of Pandit with-

out any trouble, or they may even betake themselves to the degrading affairs of the world, without forfeiting this property. Very much, however, to the credit of the Brahmans, such a neglect is not usual, and one son of the family continues generally to profess the instruction of youth. If there are other sons, they follow their natural inclinations. With such a system, however liberal it may be in appearance, and to whatever merit the individual professors are justly entitled, it must be evident that the work of education will go on slowly. It is even to be feared, that it would altogether stop, were it not for the charity which usually follows considerable reputation as a teacher. I cannot, however, avoid mentioning the very liberal conduct of the Purohit of the Dinajpoor family, Gaur Chondro Bidya Nidhi. This person has I believe proceeded no farther in learning than a knowledge of Sanskrita literature (Vyakoron), but he not only teaches that himself, and enables two brothers, who have some knowledge of the law (Smriti), to instruct pupils in that science, but he has settled on a learned man an income sufficient to enable him to instruct several youths in the Indian philosophy (Nyayo Sastro), and enables another to teach astronomy.

I took every opportunity of communicating with the Odhyapoks. Some of them declined an interview; others, who came, were soon tired of my inquiries, which of course were directed chiefly to acquire a knowledge of their manner of teaching. These left me in disgust, probably in general from not being able to answer questions, on subjects with which they ought to have been familiar. There were others however, who most liberally and patiently informed me, to the utmost of their power, concerning whatever I asked. Among these were the Purohit, his brothers, and friend, and also Roghuprosad of Potiram a metaphysician or philosopher, and Ramsunder and Madhobram of the same vicinity, persons esteemed for their knowledge in the law, as well as in literature. These persons, as well as all the possessors of religious endowments, complain of the rapacity of the new landholders, that have purchased lots of the Raja's estate, and who are alleged under various pretexts to make encroachments on the lands, that have been given to learned and pious persons of both religions. I am inclined however, to believe, that these persons would not content themselves with

idle clamour, were they really aggrieved; but, so far as I can understand, the truth is, that in the careless administration of the Dinajpoor Raja's estates these persons actually enjoyed more land than their titles justified, and it is on these portions that the new landholders have encroached. As however, the encouragement for learning is evidently too small in this district, a remedy might perhaps be found in the free lands, which the landholders have now seized, owing to the failure of heirs. The amount is not considerable, and the government, was an attempt made to recover, would wade through a disgusting scene of corruption, and very likely after all be frustrated; but if the recovery were granted to individuals of learning, on whom it might be wished to bestow encouragement, the matter might be more easily accomplished.

The defects attending the plan of education by the Odhyapoks are so great, that perhaps any addition to their endowments may be considered as ill bestowed, especially in a district where the Hindus do not form the mass of the people. I am persuaded, that enough might be recovered for the establishment of some good schools for the instruction of youth in Muhammedan science and literature, for which at present there is no establishment whatever, and the teachers of the higher schools have neither profit nor honour to encourage them in their useful employment.

The academy kept by an Odhyapok is called a Chauvari. Youths usually go there at about 12 years of age, after they have been instructed in the knowledge taught at Pathsals and in the Prakrito language; but the pupil is not permitted to read any book in that low tongue.

The highest sciences.—Literature, Law, and Metaphysics. The course of study in a Hindu academy begins with the Vyakorno or Sangskrita grammar and literature. For the first 10 years some study a grammar called Songkhyeptosar, said to have been composed by a Brahman named Komodiswor, concerning whose history the Pandits could give me no information. The study of this grammar is sometimes facilitated by the commentary of Goyichondro. Others again study a grammar called Kolap, said to have been composed by Sorbo Borma, who was contemporary with Salivahon. This grammar seems to be nearly as obscure and unscientific

as the former, as its study usually occupies 10 years, although persevering students sometimes are masters of it in eight. Others study a grammar called Mugdhobodh, written by Vopodev, a Brahman of the five tribes introduced by Adisur into Bengal, and therefore a modern author. These who use this grammar study two commentaries, one called Gon written also by Vopodev, and another written by a Brahman, Ram Torko Vagis. This system is probably much more rational than the others, as youths require only from three to five years for its study. Finally other masters use a grammar equally easy, called Saroswot, and composed by Onobhyut Acharjo of Varanosi (Benares). These also use the commentary of Govindo called Podochondrika, and that of Ramkrishno called Podmokumari.

The pupils hitherto have been employed in studying the grammar of an unknown tongue, written in that language, and probably, as usual, in the most unintelligible style, the irksome nature of which perhaps draws out the study to such a length. They then begin to learn the meaning of the words in an Obhidhan. So far as I can learn, an Odhidhan is rather a vocabulary than a dictionary, and the natives have not yet adopted the alphabetical arrangement of their words to facilitate the study of their language. The only vocabulary used in Dinajpoor is the Omorkosh of Omor Singho, whom the Pandits here, as usual, consider as a person belonging to the sect of Buddha, who flourished at the Court of Vikrom. The study of this occupies only one year, and is sometimes assisted by the commentary of a physician named Bhorot Mollik, and at others by the commentary of Ray Mukut, which by its prolixity lengthens the time of study for six months.

The students now are qualified to begin the poets, and the work usually chosen to form their taste is that called Bhotti, which is said to consist of extracts from the Ramayon of Balmiki, made by Bhortrihori, brother of Vikrom. A year is employed in reading this work, which, according to the Pandits who use it, is so excellent and sublime, that after its perusal every other poem appears flat, and is unnecessary; but others, among whom is the Raja's Purohit, prefer two poems of Kalidas, named Roghu and Kumar Sombhov. The former treats of the actions of a prince named Bhogiroth, who brought the Ganges to water India, and its study occu-

pies six months. The latter treats of the actions of the goddess Bhogowoti, the spouse of Sib, and occupies nearly the same time. Sri Chondro, a brother of the Raja's Purohit, although a professor of law, seems to extend the study of the poets more than usual, and besides the common extracts from the work of Balmiki, he reads with his pupils another history of Ram called Natok. The account which he gives of this work will afford an idea of the present taste of Hindus for fable. Honuman, the faithful servant of Ram, had written an account of his master's wars. Now Balmiki, who had written his account of these events 60,000 years before they happened, was naturally enough afraid that his work might be injured by that of one of the principal actors. He therefore applied to Honuman, who with great good nature threw his book, which was written on stone, into the sea, where it lay for many ages, until it was discovered by Kalidas, while he was bathing. This ingenious person covered himself with wax, and having thrown himself into the sea, rubbed his body on the stones, until he procured an impression of a considerable portion of this valuable work, which he published to the delight of mankind.

Other professors of law are less indulgent, and proceed to that dry study, immediately after their pupils have read the Omorkosh. The pupils are now considered as completely instructed in the Vyakorno or Sanskrita literature, and may peruse whatever of the classical authors in that language they can venture to read. In Dinajpoor no persons except Brahmans are instructed in the Vyakoron; but in some parts of Bengal the Baidyo or medical tribe, and even some rich Kayosthos are permitted to study such portions of this science as have been composed by mere men; but whatever is supposed to have been delivered by Munis or by gods is concealed from their profane eyes. Some Kayosthos have however had the audacity to lay open the veil, and have even translated part of the works of Vyas into the Prakrito language, but this is held to have been highly unjustifiable. Some Brahmans, however, justify the action; not from their alleging, that a Kayostho should read the work of a Muni, but because the works that have been translated are not in reality the composition of Vyas.

Persons who are desirous of extending their knowledge to

the study of the law (Smriti), after such a course of Vyakoron, are qualified to begin with the works of Roghunondon, a Brahman of Nodiya, whose great-great-grandson is said to be still alive. His works are said to be very voluminous, and to consist of 28 books. Of these, however, eight only are usually studied in this district, and these require five years of constant application. They are as follows:—

1. Tithi Tottwo, which treats of the laws to be observed in the performance of ceremonies at new moons and eclipses. 2. Prayoschitto Tottwo concerning the ceremonies, which ought to be performed for the remission of sin. 3. Dayo Tottwo concerning succession to property. 4. Molomas Tottwo concerning what is to be done or omitted during the intercalary moon of the lunar year. 5. Suddhi Tottwo concerning what is to be eaten on certain days, especially those of mourning. 6. Udwaho Tottwo concerning marriage. 7. Ahnik Tottwo concerning the rules for prayer. 8. Sraddho Tottwo concerning what is to be done in commemoration of deceased parents. After this course of law one Pandit reads with his pupils one of the 18 Purans called Sribhagvot, as containing an useful illustration of the dry precepts of Roghunondon. He supposes that this work was written by Vyas in the end of the first Dwaporyugo age, and that it is prophetical, as it gives an account of the wars, which followed soon after. He also supposes that there have been a great many successions of these ages, in which the same personages and transactions that appeared in one appeared also in the others, and that the history of the wars, which Vyas delivered at the end of the first Dwaporyugo, is just as applicable to the war which happened in the commencement of the present degenerate age, as it was to the war, which immediately followed the first composition of the work; in which most people will be disposed to coincide with this learned man. This, however, is one of the works that have been translated into the profane tongue, and doubts are now raised concerning its authenticity. In this school men have usually finished their education in the law by the time that they are 30 years of age. Some of the Pandits, however, in place of this flight to poetical regions, after having finished the usual eight books of Roghunondon, teach the Prachin Smriti, composed by Sulpani, a Brahman of Yosor (Jessore), which treats

of the same subject with the second book of Roghunondon. They then give their pupils the Sraddho Chintamoni, a work of Vachospoti Misro, a Maithilo Brahman, which treats on the laws for performing funeral ceremonies.

Grammar (Vyakoron) is a necessary preliminary to all science; but many proceed to study metaphysics or philosophy without attending to law, and many on the contrary study law without a previous knowledge of that important branch of knowledge. Metaphysics or the Nyayo Sastro are the glory of the Pandits of Bengal, and are no where in India so much studied. The Pandits here say, that this science was first disclosed by the god Sib to Gautom, who wrote a treatise on the subject, that has been lost. Although the Brahmans strenuously assert the contrary, I think there is great reason to believe that this Gautom is the same with the fourth great legislator of the Buddhists, whose doctrines being now thought heterodox, will readily account for his philosophy having disappeared. The most ancient work on this subject now remaining, according to the Pandits of this place, is a treatise called Chintamoni, said to have been written by a Maithilo Brahman; but it is so obscure and difficult, that few are able to comprehend its meaning. The works most usually studied have been composed in modern times.

The minds of many students become confused by the abstracted nature of these investigations, and many of them are considered by the vulgar as little better than fools. The greater part, however, pursue their studies for 12 or 14 years more, reading a great variety of books, which it would be tedious to mention.*

Grammar, law and metaphysics, are considered as the noblest sciences; and are the only knowledge which the Odhyapoks of Bengal will condescend to teach in their Chauvaris; and of these the study of metaphysics is considered as by far the most honourable, and next to that is the study of the law.

The lower sciences—Theology, Worship, Astrology, and Magic.—There seem to be three other sciences that are studied and taught by Pandits, but which, in this country, do not entitle them to be considered as Odhyapoks, nor their

* However tedious many of these statements may appear, it would be unjust to suppress them, and they afford a melancholy picture of the mind of the people.—Ed.

schools to be called Chauvaris. These sciences are Bedanto, Agom, and Jyotish, to which may be added medicine, or rather magic. The first is an investigation into the doctrine of the *beds** concerning the Divinity, on which subject Pandits are exceedingly divided in their opinion; and in the south of India this appears to be the favourite study. In Dinajpoor the Brahmans seem to give themselves very little concern about the meaning of these sacred books, and content themselves with reading certain portions of them on certain occasions. In this they probably act judiciously, as the doctrine is delivered with such obscurity, that the systems founded on it by the most learned doctors of the south differ so widely, that the person whom one sect worships as the supreme being, is by another considered as the Devil. There is no Bedanto Pandit in Dinajpoor. It is indeed alleged, that there was none in Bengal until of late, when some learned men were brought from Benares by a rich Kayostho of Calcutta (Nobokrishno or Nobokissen), who had acquired a large fortune in the service of Lord Clive.

The Agom, or science which teaches the proper manner of worshipping the gods so as to obtain power, is the favourite part of divinity in Bengal. Several of the Dinajpoor Pandits have studied this; but none of them teach it, and those, who wish to obtain a profound knowledge, go to other places, especially to the neighbourhood of Dhaka, where the Tontros, or books which explain this doctrine, are much studied. The mode of worship, accompanied by intoxication, indecency, or horrible practices, which these books are said to inculcate, is either altogether neglected, or carefully concealed in this district, although indecent figures are common in the ornaments of the places of worship. Indeed I am told, that this mode of worship has made little progress among the Brahmans of Bengal, who are mostly married; and is chiefly confined to holy men, who have relinquished the world, and can trust themselves with safety in the midst of temptation. No books, however, are in such request as the Tontros, which I believe may be considered as a system of magic. In this country all the Brahmans, who are of the sect of Sib or Sokti acknowledge the Tontros to have been

* *bed*, the name of the Hindoo Scriptures.

revealed by the former, and to be the proper guide in religious matters. Now in these books there are said to be forms of invocations for six kinds of witchcraft. 1. Maron, by which an enemy may be killed. 2. Uchchaton, by which an enemy becomes a vagrant like an ideot. 3. Vosikoron, by which a person may procure the friendship of his enemy. 4. Stombhon, by which an enemy becomes dumb. 5. Vidweshon, by which an enemy is made to quarrel with his friend. 6. Santi, by which a person may be cured of sickness. These are supposed to be effectual only when pronounced by a Brahman, and accompanied by sacrifices. The Brahmans of Kamrup are considered as the greatest adepts in this science, which is contained in the Tontros, called Sarodatilok. This I have stated on the authority of the Tontrosar composed by Krishnanondo of Nodiya, who is supposed to have lived about 300 years ago, and to have been descended from Agom Vagis, the most learned person in the Tontros that has ever been known.

The lowest of all the sciences studied by Pandits, in their opinion, is the Jyotish, which comprehends astronomy, and the knowledge of the past, the present, and the future, which is attained by means of the stars, and of the lines on the human hand or forehead. Many people have imagined, that the Jyotish were a sect of philosophers, who neglected fable, and followed reason as a guide, and who were numerous and much respected in India. If there are any such philosophers, I have never met with them. All whom it has been my fortune to see professed astrology, and most of them also practised Chiromancy. Although all Hindus of high rank are addicted to this folly, the Pandits, who profess no other science, are considered as the lowest of all others, and indeed the science is often possessed and practised by Sudras, who are called Gonok, and who belong to the Daivaggno tribe commonly called Daibok. In this district, however, the Daiboks procure a living chiefly by selling almanacks, and cannot make calculations. As the practice of astrology is profitable, a considerable number of Brahmans, even men very learned in other sciences, follow this art, and in this district almost every academician (Odhyapok) practises it more or less. No undertaking of any sort of consequence can commence in a Hindu family of rank, without a wise man having been con-

sulted to find out the proper day. Whenever a child is born, the star of its nativity is calculated by the art called Thikoji, which is not considered as difficult. Afterwards, the earliest opportunity is taken of procuring a man of profound science in the art called Koshthi, by which from the Thikoji he foretels the events of the child's future life. Every Hindu of rank has two names, one public and one private, which last is only known to the parent's Guru, Purohit, and astrologer, and is carefully concealed from all others, least any person should use it in enchantment (Montro Bhibhut or Gun), which is of no efficacy, where the common name only is used.

The number of high Hindus being small in this district, and both Muhammedans and low Hindus being exempted from the folly, the number of Jyotish is comparatively inconsiderable; and only one Pandit instructs any pupils in the science. He also constructed almanacks; but those commonly in use among the astrologers are chiefly brought from Mauliya, near Moorshedabad, and Keoya, near Dhaka. The astrologers of this district, who live entirely by the art, reside chiefly at Churamon; but the man of science lives near Dinajpoor, and is supported by the liberality of the Raja's Purohit. He is now blind with age; but he never possessed any astronomical instrument, and never attempted to take an observation. His pupils have studied under him the Siddhanto Rohosyo, and the Vosoti; but are not acquainted with the history of these works.

No person teaches medicine in this district, and indeed proper physicians are very few in number. In all cases of sickness trust is chiefly placed in prayers and sacrifices, and in certain magical incantations, that are considered as effectual, and called Jharon Montros. People of rank are unwilling to acknowledge that they are instructed in these incantations; but, so far as I can learn, this arises from a fear that they would be too often called upon by the poor for assistance, and they would consider it as disgraceful to refuse relief when asked. But all ranks of Hindus, and even the low Muhammedans, believe in the efficacy of these incantations; although it is generally only the lowest persons that profess to be acquainted with them. Persons of this rank can receive, even from the lowest, a reward, which is

an object worth their acceptance. Such is the account that I received in some divisions. In others the higher ranks denied a belief in the efficacy of these incantations, except in the bites of serpents, in casting out devils, and in small pox; and these sceptics alleged, that in fevers they procure a Brahman to read certain extracts from the Sribhagvot, which are called Ban Juddho Stov.

People who are deprived of reason, or who have the epilepsy, or strong hysteric fits, are supposed to be possessed by devils (Upodevta), which are the spirits of those who have been killed by violence, or who have committed suicide, at certain unfortunate conjunctions of the stars, which are detailed in the books of the philosophers called Jyotish. Until certain ceremonies have been performed, these unfortunate spirits cannot obtain any proper body into which they can migrate, and therefore molest other persons, chiefly women, in order that the proper ceremonies may be performed. The spirits are of various kinds, according to the bodies which they formerly occupied; those of a Brahman are called Brahmodaityo, and are exceedingly troublesome; those of Sudras are Bhuts; those of women are called Songkhini or Sangchurni; those of unmarried girls or of very low women are called Aloya and Pretini or Petini; and those of Muhammedans are Mamudas; and all those who have been killed in war, (except Khyetriyos who go immediately to heaven) on those unfortunate conjunctions, became Nishkandho or Nikondas. Both Brahmans and Sudhas, it is imagined, can acquire the knowledge by which they can tell whether the afflicted person labours under a disease or a devil; and both are permitted to learn the ceremonies by which these devils are supposed to be cast out; and these are detailed in the Tontros; but many decline the office, as it is supposed, that among those who practise this science, few ever have children. It is not lawful for them to take money; but they are much courted when any accident happens, that requires their assistance. The unfortunate spirits procure rest by any of their relations going to the Bhagirothi or Goya, and performing some easy ceremonies; but the latter place is the securest; for, if there is a hair on the bank of the river where the ceremony is performed, it will be of no effect. These ideas are very generally received in the Dinajpoor district, and several

persons are supposed to be possessed of the science, and have frequent opportunities of putting their mummery in practice; as devils are thought to be common, and Goya is at a considerable distance.

Other incantations are used on many other occasions; sometimes innocent enough, such as when a girl employs a wise man (Aushodhokari) to secure the affection of her lover; but they are also used with criminal intentions, such as to procure the destruction of an enemy, or to remove a disease from one person to another. The belief in these is not only universal among the vulgar; but seems pretty general even among the higher rank; and a landholder of an old family, a Brahman by caste, had lately before my visit attempted to remove a mortal disease, from his mother to some person that was indifferent. All these incantations and the whole of this mummery are part of the Tontros, and of the Hindu science called Agom.

CHAPTER V.

RELIGIONS AND SECTS OF THE PEOPLE OF DINAJPOOR.

According to the opinion of the principal native officer of revenue, three-fourths of the whole people of this district are Muhammedans, but my native assistant estimates the Muhammedans at ten-sixteenths of the population. In each division I consulted the most intelligent persons on this subject, and have placed the result of their opinions concerning the proportion of Hindus and Muhammedans, in the general statistical table. If the extent of occupied land in each Thanah be divided in these proportions, and the whole sums of each be added, to enable us to form an estimate of the population, the result will be, that the Moslems are to the Hindus in the proportion nearly of 70 to 30, somewhat more than the estimate of my assistant, and considerably less than that of the officer of revenue. Both are Brahmans. In the statistical Appendix will be found an estimate of the numbers belonging to each class, into which I have divided the population.

Muhammedans.—The Muhammedans seem to be on the decrease; for most of the landlords and their agents being Hindus, give these encouragement to settle, and wherever a landholder's house has been for any length of time established, there is found a considerable number of the pure tribes, which is seldom the case in any other part. I think it indeed probable, that the persecution by Sultan Jalaludin nearly exterminated the Hindus; for at least a half of those now in the district may be traced as having emigrated from other countries, especially from Kamrup, which was not subject to the Muhammedans, until after the persecution. Although the two people have mutually adopted many of each others religious practices; yet there is a considerable ill-will between them, which is only prevented from going to excess by the fear of an indifferent power, that is superior to both. Many of the inferior officers of government, and almost all the lands being in possession of Hindus, the Muhammedans are rather sufferers; not however to any very outrageous degree. They chiefly indeed suffer from

not being allowed to kill oxen, and from the depredations of sacred bulls, or other consecrated cattle; and it is alleged by encroachments on their religious endowments; these indeed cannot well expect to escape, as even the Brahmans complain of the landholders' rapacity.

The chiefs of the Muhammedan religion in this district are the Kazis, who have a jurisdiction in all things considered as more immediately connected with religion, such as marriage, circumcision, the eating forbidden things, and the like; and who act in some measure as notaries public, in giving authenticity to contracts. The establishment in this province seems to be very irregular, some persons having under their jurisdiction 11 pergunahs, and others only one; and the extent of their jurisdiction has no connection with that of the magistrate. Many of them are not resident, at least within the bounds of their jurisdiction, and act by deputy. I believe, that formerly their office was in general hereditary; although the confirmation of the magistrate is now necessary. Their profits arise from fees. Those of them, that I saw, were decent persons, who had much more the manners of gentlemen than any other natives that I met in the district.

Under the Kazis are a set of priests called Mollas, of whom there is one in general for every very populous subdivision (Mauza), or for every collection of smaller ones, that is called a Diyar. They are generally appointed by the Kazi; accordingly to the wish of the heads of families. Although they are only a kind of deputies to the Kasi; yet, as they are usually ignorant fanatics, they are more beloved by the populace. They read or repeat prayers, or passages of the koran at marriages, funerals, circumcision and sacrifices; for no Muhammedan here will eat meat or fowl, over which prayers have not been repeated, before it has been killed; and the animals are frequently killed before the monument of some saint. According to the Kazis many of these Mollas cannot read, and these only look at the book, while they repeat the passages. Indeed they are in little danger of detection, none of their audiences understanding a word of Arabic. Even these who are able to read, very seldom understand this language.

The religious persòns, however, who are most respected among the Moslems, are the mendicants called Fakirs. The number of reputed saints who have had monuments erected

to their memory, generally over their tombs, is astonishing; and is a clear proof of the ignorance and bigotry that prevailed during the Muhammedan government. It may on an average be estimated, that there is at least one saint's (Pirs) monument in each subdivision, and in this district the worship of these by offerings (Sirni) is the principal act of devotion. Many of these monuments have no endowment, but the people of the village unite to keep it in repair, which is easily done; as it is usually a heap of earth, perhaps a little white washed; and in the evenings they also in turns light a lamp before it. But to many of the monuments, and at all those of any considerable reputation, there is an endowment in land, to support one or more Fakirs, who repair the tomb, light the lamp, receive the offerings, and read or repeat the prayers (Fatya), that should accompany these donations. The mosques too, that have endowments, are usually placed under the charge of a Fakir, who should perform there the same duties; but the first is in general much neglected. He also calls the people to pray at the proper hour; but this part of worship, and the ablutions prescribed by Muhammed are in general much neglected by his followers in this district. Some of these Fakirs are no doubt very decent men in their manners; and some families, from their features and appearance, would seem to have preserved their blood free from mixture with the natives of this country: but in general they are very poor creatures, sunk in bigotry and ignorance, and affecting great sanctity and austerity of manners. Several whom I met would scarcely answer any question, but were continually sighing, groaning, and muttering prayers. The common conversation of the more rational among them is concerning the wonders performed by their saint, and while they very seldom can tell when he lived, from whence he came, or any circumstance relative to his history, they generally suppose that the whole affairs of the neighbourhood, if not of the world, are conducted by his interposition. As serpents are the common agents of some of the most usually worshipped Hindu deities, so tigers seem, not unaptly, to have been chosen by the Muhammedan saints. Many of the woods in this district grow on ruins, and most ruins have been taken possession of by a saint, whose vicinity is of course the common haunt of a tiger. And as these animals seldom attack man in this district, the Pir is generally allowed

by persons of both religions to have restrained the natural ferocity of the beast, or as it is more usually said, has given the tiger no order to kill men. The tigers and Fakirs are therefore on a very good footing, and the latter denounces the vengeance of the saint on any person who molests the beast of prey, and assures the people that he is perfectly harmless towards all such as respect the saint, and make him offerings.

Besides these Fakirs, who have a regular establishment, whose office is hereditary, and none of whose families have been known to contaminate themselves by labour, but have lived entirely on the charity that has been procured either by themselves or ancestors, and who are exceedingly respected; there are some who have degraded themselves by industry; and many, who, tempted by their notions of religion, or by indolence and avarice, have assumed the life of a Fakir, have dedicated themselves to God, and who live by begging. Fortunately, some expense attends the ceremony, which prevents the order from increasing too rapidly; and new Fakirs are also expected to observe the rules of the order according to the strict manner of those called Murids. Fakirs in general marry, and all their children belong to the order; but a family does not obtain full respect for some generations, nor until all memory of their adoption into the order has been obliterated. Some old Fakirs also observe particular customs, and are considered as more peculiarly dedicated to God. These are called Murid, and cannot shave the head nor beard; and must perform the prayers and ablutions as prescribed by their prophet.

Besides the neglect of prayer and ablution, the Muhammedans of this district forget the rules of their law in many points. They are in particular accused of being too easy husbands; for they neither confine their wives with proper strictness, nor are they even much offended at occasional private intercourse with those who can render the situation of the family somewhat more comfortable. The Mollas also allege, that many persons, in order to save expense and defraud them, live as man and wife without having had the advantage of a religious ceremony. A still more flagrant breach of the law is, I know, exceedingly common. Offerings at the monuments of saints are generally made from rather interested motives, the

votary is in fact generally hopeful to procure some favour from the saint of much more value than the offering; and should he be disappointed, he usually has recourse to some Hindu deity, and tries what may be done by means of a sacrifice. The heathen priest makes a little stretch of conscience, receives the offering for the honour of the god, and is liberal in his assurances that his prayers will be effectual. These priests it must be observed are of the dregs of the Brahmans; a man of a proper way of thinking, would scorn to pray for a Turk. Another practice, savouring of idolatry, is also very common. Images of horses made of clay are sold by many potters, and are placed on the monuments of saints, as offerings, to induce them to cure the sick, or in consequence of vows made by those who have been in any danger.

Many of the resident Fakirs have been concerned in thefts and robberies; and it was a number of adoptive Fakirs that some years ago assembled in great bodies, in this and the neighbouring districts, which they plundered with the utmost barbarity; and when pursued were wont to retire to Morung, in the dominions of Nepal, where they found shelter, and a sale for their booty. While these ruffians were spending the produce of their illicit gains, the Fakirs residing in Dinajpoor were suspected of watching for a favourable opportunity of bringing down their accomplices. Many still reside in Morung, but their depredations have of late been on a small scale; nor have they ventured for some years to enter this district in hostile array. By some unaccountable mistake they have been called Sonnyasis, who are a sect of Hindu mendicants; and the pilgrims going to bathe in the Brahmoputro have often been suspected as concerned. That among these there are spies of the Fakirs, as well as many idle and disorderly persons, I have no doubt; but I was assured, both by Hindus and Muhammedans, whom I consider as perfectly well informed, that the Morung gang are entirely of the latter religion. Pilgrimages are very much in fashion among the Moslems, as well as among the Hindus; very few, however, of this district ever think of going to Mecca, but wisely content themselves with Peruya, which I believe is the most celebrated pilgrimage in Bengal.

The parts of their religion that are most strictly observed, are, fasting through the day during the month Rumzan; and

the commemoration of the death of the two Imams, Hoseyn and Haseyn, which is performed with as much show and noise as possible; and for this purpose a kind of musicians named Zari are employed. Another kind (Pirer Gayon) is employed to celebrate the praises of the different saints; for this sort of noise is extremely grateful to the ear of the natives.

HINDUS.—The Hindus, especially those of pure descent, being but a small proportion of the people in this district, I might pass them over until I came to places where they are more numerous; but this would render some parts of my account obscure, I shall therefore notice some of the most remarkable particulars concerning them, and give a general view, which I shall endeavour to render more complete, when I pass into other districts.

Brahmans.—There is no trace remaining to show that before the time of Adisur any Brahmans had obtained a permanent settlement in this district. It contains no Brahman families of the five southern nations, nor any of Saroswot, or Utkol. A very few from the neighbouring nation, Maithilo, are to be found, but tradition relates their settlement to have been very recent. About 50 years ago, the proprietor of Rajshahi introduced about 200 families of Gaur Brahmans from the west of India; and 3 of these, who have relinquished the world, and who have become Sonnyasis, according to the rules of Songkor Acharjyo, have settled in a convent of Hawora division: these are the only persons of that nation which are to be found in the district. Almost the only families, therefore, of proper Brahmans to be found in this district, are the Kanyakubjos, of whom, according to tradition, two colonies have been brought to Bengal.

Adisur Raja, a physician, who founded a Dynasty that governed Bengal for some time before the Muhammedan conquest, is said to have introduced five Brahmans, with their families, from Kanyakubjo, or Kanoj, a city in the west of India. These five men were of five different tribes (Gotros, viz. Bhorodwaj, Kasyop, Sandilyo, Batsyo, and Savornyo), and on that account all their descendants, who form by far the greatest portion of the sacred order in Bengal, are called Pongchogotros, or the five tribes. The wife of Adisur had a son named Bollalsen, whose father was supposed to be the Brohmoputro river, who for the purpose of impregnating the

queen, assumed the convenient form of a Brahman. Whether or not Adisur knew of this circumstance, and was of so easy a temper as to overlook the liberty of the Brohmoputro; or whether it was not divulged until the favourable time when Bollalsen became a lawgiver even in the nice affairs of caste, and might wish for the authority of divine origin, I cannot take upon myself to say, both being probable; but it is generally allowed by the Brahmans here, that Adisur left the quiet possession of his kingdom to Bollalsen. In his reign the five families of Brahmans had multiplied so fast that they not only had become numerous, but had obtained settlements in two of the provinces, Rarhi and Barondro, which, as usual among Hindus, who delight in subdivision, had produced a complete separation of caste. It even became advisable to separate each division into different ranks, and to assign different customs for each. This I confess appears to me inexplicable. Were I allowed to suppose that the original colony was more numerous, or that Bollalsen was not the immediate successor of Adisur, but followed after an interval of some hundred years, as Abul Fazil imagines, the difficulty would be removed; but the tradition is positive against both these suppositions.

However, this may have been, the Rarhi Brahmans are divided into Kulin Bongsoj and Srotriyo, and the Barondros are divided into Kulin Kap and Srotriyo. These divisions took place according to the merits of the persons at the time when they were formed. The most virtuous Brahmans of each province were made Kulins, those next in merit were made Bongsojor Kap, and the remainder were classed in the lowest rank called Srotriyo. The pre-eminence however, is now hereditary, so far at least as the Brahmans of the same province are concerned; that is to say, a Barondro Brahman must respect a Barondro Kulin, however ignorant or knavish, more than the most learned and virtuous Srotriyo of Barondro. This however, by no means extends to the other province. A Brahman of Barondro estimates all the three kinds of Rarhis, according to the respective personal merit that each individual possesses. The Rarhi in the same manner respects his own provincials by their birth; but he values Barondros, and all other Brahmans according to their virtues. Although Dinajpoor be in Barondroland, yet Brahmans of

Rarhi are also numerous in this district, probably in the proportion of 6 to 10 Barondros. I must therefore give some account of each.

A Kulin Brahman of Barondro cannot marry above three or four wives, the fathers of Barondro not choosing to pay for unreasonable undertakings; for the husband always gets money with each wife, more and more in proportion to the lowness of her birth: and he seldom gives himself any trouble about maintaining his wives or children, but leaves these duties to the care of his father-in-law. If the family happens to consist of sons chiefly, the maternal grandfather has great profit, because he receives money for each at his marriage; but, if there are many daughters, he has made a bad speculation; and, unless very rich, is ruined, as he must not only sell everything, but even borrow and beg to the utmost of his power, in order to procure them husbands. They have however a greater indulgence than the lower orders; for a Kulin girl continues marriageable at all ages, although it is considered as very disgraceful for the father to keep her long waiting; and he is even very apt to incur still greater disgrace, by her forgetting the laws of chastity, which these girls, brought up in the full expectation of early marriage, are very apt to do. Husbands are however, often difficult to procure, as a woman cannot marry a man younger than herself, and as a large proportion of the men are bought by the parents of low women. If a Barondro Kulin marries the daughter of a Kap, he is degraded to that rank; but his sons and grandsons are more respected than usual, and are more marriageable. A Barondro Kulin may however marry the daughter of a Srotriyo, without any degradation, and all the children of this marriage are Kulins. A Kap also receives money, when his son marries the daughter of a Srotriya; the children are elevated to the rank of Kap; but the husband must keep his wives and children at home, and provide for them. The Srotriyo men were thus very ill-provided with women; and so long as the rules of caste were strictly regarded, a great many of them could not procure wives. But since the deaths of Rani Bhowani of Rajshahi, and of Raja Krishnochondro of Nodiya, two very pious and powerful landholders, who supported the laws of caste, these men have been let loose, and are not ashamed to give money to procure wives, so that the

higher ranks of Kulin and Kap are defrauded both of their due profit and pleasure; for the Srotriyo fathers are not able to resist the temptation of the money, especially as they also save, what they must have given to their betters.

A Rarhi Kulin Brahman may marry as many wives as he pleases, and some have 60; but in general they cannot procure above 8 or 10. They visit them alternately, and give themselves no sort of trouble about the maintenance of either the mothers or children. In other respects there is little difference between their customs, and those of the Barandros. By a marriage with the daughter of the next rank they are reduced to that order, or at least they are considered as a lower order of Kulins; but their children by women of the lowest order are elevated to their full dignity.

The Brahmans of the five tribes are subject to many other divisions; but I shall at present confine myself to notice a few. Whatever his birth may be, a Brahman may either become a Pandit, who adheres to the proper duties of his profession, or he may engage in worldly affairs, and take service, in which case he is called Vishoyi. These two terms are analogous to the words Baidik and Laukik of the south; but the distinction is not so widely drawn in the north; and changes from the one kind of life to the other are there less uncommon, which is probably owing to the high pre-eminence given to family rank. It must also be observed, that among the Kulins there are very few Pandits, and most of these learned persons belong to the third rank or Srotriyos, who, having little rank by birth, must study if they are desirous of obtaining respect.

The difference of sect or religious tenets, produces much less separation among the Brahmans of Bengal, than it does among those of the south, owing probably to the doctrine of the Bedantos having little attracted the notice of the former; so that the greater part of the Brahmans of Bengal, although divided into five sects, have not placed themselves under the banners of any great doctor, such as Songkar, Ramanuj, or Madhov; not but the writings of several such personages are known, but they have not produced heat enough to generate controversy. Indeed it is not customary with most of the Brahmans of Bengal to declare the sect to which they belong,

except to their Guru or spiritual instructor; and it is not considered as civil to ask them the question. Whereas those in the south glory in their sect, and take every opportunity of declaring their adherence to it, and their aversion to all others.

Among the Barondro Brahmans, however, many of the third rank openly profess themselves of the sect of Vishnu, and are called Odwaito Bongso, or descendants of Odwaito, a learned and holy Brahman of Santipoor, who declared himself a worshipper of Krishno, and established rules for the belief of his descendants, none of whom, whatever his private opinion may be, will venture to say, that he departs from the creed of his ancestor. In the same manner a Rarhi Brahman of Nodiya named Nityanondo, who lived about 300 years ago, openly professed himself a follower of Vishnu; and his descendants follow his tenets. Both the descendants of Odwaito and Nityanondo are called Goswami or Gosaing (*vulgo* Goseyn); but must be carefully distinguished from those of the same title who come from the western provinces, who are persons of all castes, and who say, that they have forsaken the world, and have taken vows of poverty and chastity; although most of them are keen merchants, and pay very little other respect to their vows, except in abstaining from marriage. The Goswamis of Bengal on the contrary marry; but almost all of them adhere to the proper duties of their caste, and very rarely accept of service.

The other Pandits of the five tribes, who do not acknowledge the nature of their creed, call themselves simply Pandit Gurus. The Goswamis form about a tenth part of the five tribes, having been able to multiply fast, as they are Gurus or religious instructors for almost all the Sudras, and have considerable means of subsistence. Like other followers of Vishnu, they chiefly study as their guide in religion, the Purans or works attributed to Vyas; while the Guru Pandits, although they occasionally read the Purans, study chiefly the books called Tontros, supposed to have been revealed by the god Sib. The science contained in the Tontros, and which is eagerly studied in most parts of Bengal, is called Agom; and the most learned doctor in this law is esteemed to have been Agom Vagis, who lived at Nodiya, about the same time with Nityanondo. These differences of sect produce no sort of difference of caste, and every Goswami is anxious to pro-

cure a husband of the first or second rank for his daughter; although none of these dignified persons profess the worship of Vishnu, and the wife is always expected to adopt the sect of her husband.

A most essential difference arises in the rank of the five tribes, from that of the persons whom they condescend to instruct in religious matters, or for whom they act as priests. The former or teachers, are called Gurus; the priests who read prayers on solemn occasions are called Purohits, and in general are less respected than the former. Those who perform these offices for Brahmans alone are highest in rank; but few of such respected persons belong to the five tribes. Next follow such as perform these offices for the two higher ranks of Sudras, the physicians and scribes. Then follow those who cut for the nine pure castes of tradesmen (Novosakh), and for a few tribes that are admitted to be of a similar rank.

All these Brahmans continue to be tolerably respected, and may give their daughters in marriage to Kulins; but certain religious offices in some measure deprive a Brahman of caste, and his daughter cannot intermarry with a person of any of the three pure ranks. The highest of these impure Brahmans are the Ogrodani, who receive the first charity (Dan), that a person offers in commemoration of his deceased parents. The charity offered on all future occasions is accepted by the highest, and is a considerable source of revenue. A tradesman of the nine pure castes will condescend to drink the water of an Ogrodani; but rejects that of all the inferior Brahmans, who are considered as inferior in rank even to a Sudra.

The Brahmans, who condescend to act as Gurus and Purohits for any of the impure tribes, are called Vorno, and occupy the next rank; but differences exist in their rank, according to the various degrees of their disciples' impurity. Next to the Vornos are the Moruiporas, who read the funeral service over any person lower than a Brahman. These are the lowest persons, that are descended from the five tribes, which were introduced by Adisur. The Pujaris, or priests, who officiate in temples, are considered as blameable for undertaking so low an office; but the Brahmans of the third order (Srotriyos), who usually accept of the office

are not on that account degraded from their rank, provided the temple has been built and endowed by a person of pure birth, such as a tradesman of the nine pure castes, and such persons are the usual Gurus of the lower castes. The Pujari is indeed generally selected from the family of the founder's Purohit. The temples founded by persons of low origin are served by Vorno Brahmans. Brahmans of the five tribes, very unlike those of the south, not only act as Pujaris in temples where bloody sacrifices are made, but actually make the offering, and eat the meat. They are also permitted to eat fish and venison, with five other species of animals, namely the rhinoceros, hare, porcupine, turtle, and a large kind of lizard (Sorno Godhika). Few, however, avail themselves of any animal food except fish, and many abstain even from that indulgence. Next in number to the five tribes are the Baidik Brahmans, a colony which also came from Kanyokubjo, but at a latter period. I have not been able to ascertain the time, but they say, that they were introduced by Adityo Subuddhi Narayon, Raja of Srihotto, which is north from Dhaka. I do not know what place is meant, unless it be Silhet. These Baidik Brahmans seem to have nearly the same customs with the five tribes; but are considered as higher, are not divided into three ranks, and none of them have betaken themselves to service, nor have any degraded themselves so as to become Vornos, nor scarcely any so much as to act as Gurus for Sudras of even the highest rank. By far the greater part of the Gurus of the five tribes are Baidiks, who excel in learning. From having settled in different parts of the country they have separated into two tribes, that do not intermarry, the one called Paschatyo, and the other Dakhyinatyo. The Paschatyo, who are mostly settled in the north-east parts of Bengal, are considered as rather the highest, and their hereditary chief and religious instructor (Guru) still resides at Srihotto. Among the Baidiks also there arose a person of great celebrity named Chaitonyo, who openly professed the worship of Vishnu, and who having no children instructed his pupils in that doctrine, which their descendants now adopt, and are called Chaitonyo Bongso and Goswamis. The others conceal their sect, assume the title of Pandit Gurus, study the Tontros, and are by far the most numerous. The Baidiks

do not indulge themselves in numerous wives like the higher ranks of the five tribes, and seldom, if ever, taste even fish. They offer sacrifices, but do not eat the flesh. None of them are Pujaris nor priests in temples.

In Dinajpoor are many persons calling themselves Brahmans; but neither the five tribes nor Baidiks acknowledge them as such, nor as descended from the sacred persons, who proceeded from the mouth of Brahma. Some pretend, that their ancestors were created by Vyas, and this seems to be their own opinion, as they call themselves Vyasokto. A circumstance, said to be related in the Sri Mohabharot, will perhaps throw some light on the subject. Porasor, the father of Vyas, was on a certain day near the river, and observed a fisherman (Kaiborto), who had a most beautiful girl in his boat. The Gymnosophist could not resist the violence of the desire with which he was seized; but entered into the boat and became the father of Vyas, who cannot well be considered as a Brahman, the maternal line being impure. We may therefore suppose, that the Vyasokto are the descendants of Vyas. The Pandit of the survey, however, will not allow of the illegitimacy of Vyas; and supposes, that Bollalsen, when he raised the Kaibortos to the rank of pure Hindus, allowed their Gurus or priests to assume the name of Brahmans. It must be observed, that many of the impure tribes of Hindus have Gurus of their own, totally independent of the Brahmans, and the Vyasoktos continue to be the Gurus and Purohits of that tribe alone, and have no sort of connection with the other Brahmans. I met with no person of any learning among them, which has prevented me from entering into a particular detail of their customs. Except families, which have evidently migrated lately into Bengal, there are none in that country, who pretend to be Khyetriyos or Vaisyos, and the people may be divided into Brahmans and Sudras.

Between these, however, are in some measure suspended two tribes, the Daivoggnos or astrologers, and the Bhat or bards; but I procured no information concerning these that is interesting. The Daivoggnos here have been nearly deprived of their profession by the Brahmans, and in the south entirely. There they (Daivoggnos) have become weavers, have refused obedience to the sacred order, and have adopted

priests of their own. Whether this was in revenge for the encroachments of the Brahmans, or whether these were in consequence of the rebellion of the astrologers, I cannot take upon myself to say. The highest of the Sudras are the Baidyos or medical tribe, concerning whom I shall say nothing, as I met with no man of learning among them. The Kayosthos or scribes follow next, and were once of more importance than they are now; as at one time they managed most of the revenue and commerce of the country; but the Brahmans of the five tribes, having applied themselves more closely to business, chiefly since the English government, there can be no doubt, from their superior intelligence and education, that they will soon obtain the whole, as they have already a considerable part. The Kayosthos, however, are now enjoying the fruit of their former labours, and a great many of the landholders are of this tribe. The five Brahmans, who were introduced by Adisur, were accompanied by five Kayosthos; but all the Kayosthos of Bengal are not considered as sprung from them; and their descendants seem to have settled chiefly in the western districts, forming the two tribes called Uttor and Dokhyin Rarhi; while the Bonggoj and Sudra Kayosthos occupy the eastern districts towards Dhaka, and seem to be of a more ancient a line. Bollalsen arranged their ranks, and subdivided them variously. Those of Dokhyin Rarhi, who seem to have been introduced into Dinajpoor by one of them, who was ancestor of the Raja's family, were divided by Bollalsen into Kulin and Maulik; but both can intermarry. On the whole this caste has been frittered into endless subdivisions, concerning which there are several treatises; but to follow them would be tedious, and perhaps useless. Those of Dinajpoor chiefly follow the Pandit Gurus and the Tontros as their guides in religion; the Rajas, however, were of Vishnu's part.

Next to the Kayosthos are nine tribes (Nobosakh) of tradesmen, who, although greatly inferior to the scribes, are still considered as pure Sudras; for a Brahman may drink their water without loss of caste; and a Brahman, who condescends on certain occasions to give them instruction, is not altogether disgraced. In this country they are mostly followers of the Goswamis. The trades are—1. Druggists; 2. Workers in shell; 3. Copper smiths; 4. Cultivators of

betle-leaf; 5. Weavers; 6. Makers of garlands; 7. Blacksmiths; 8. Potters; and 9. Barbers.

The extreme variance, that is found in the arrangement of castes in different parts of India, appears to me a pretty convincing proof, that they did not proceed from any original general law; but were adapted to the prejudices of the various Indian nations, respecting the ranks of different trades, when these nations were induced to receive the doctrine of caste from the Brahmans. In Bengal, for instance, the coppersmiths and blacksmiths are considered as distinct castes; whereas in the south of India they are united, and conjoined with the carpenters, masons, and goldsmiths, who in Bengal are placed among the impure tribes, as the whole are in the south, probably because there they persisted in having Gurus of their own.

Nearly in the same rank with the nine most distinguished trades, and within the limits of pure Sudras (Sot Sudra), Bollalsen, according to tradition, has placed the following castes, which are found in Dinajpoor.

1. Retailers of grain, salt, &c. 2. Of the same profession. 3. Preparers of sweet-meats. 4. Keepers of buffaloes. 5. Goyala, keepers of kine. 6. Cultivators. This list of the professions, which were admitted into the limits of pure Sudras by Bollalsen, seems to me curious; as it probably shows the degree of importance which each possessed in his time, and it is probably owing to the same circumstance that the Kaibortos obtained a preference over the other tribes of cultivators in Bengal, all of which are reckoned impure. This I think will be confirmed when it is considered that the fishermen among the Kaibortos, who in Dinajpoor are called Jhalos, have been left among the impure tribes, as being of little importance; while the Vyasoktos, or priesthood common and peculiar to both Jhalos and Kaibortos, have been elevated to the title of Brahman. Before the introduction of proper castes the various tribes of India were probably like the ancient states of Greece and Italy; a Roman could only marry with a Roman, or an Athenian with an Athenian; for the same circumstance takes place among the rude tribes of India, although these have no proper distinction of castes. This circumstance no doubt greatly facilitated the introduction of proper caste, each tribe took its place among the pure or im-

pure Sudras, according to its importance, and continued as before to confine its marriages within itself. I am persuaded that the impure tribes are not as commonly supposed the offspring of the four pure castes contaminated by illegitimate connection. The Baidyos for instance, who are alleged to be descended of a Brahman by a Vaisyo woman, are placed at the very head of the pure tribes of Bengal. The same origin is assigned to the Daivoggnos, who hold a still higher station; but of this more hereafter.

The pure Sudras are distinguished from those below them by having pure Brahmans for their Gurus and Purohits; and by their abstaining from all food that is forbidden to Brahmans, from intoxicating drugs, from concubines, and from marrying widows. The Kulin Kayosthos are allowed to keep two wives, and can sell their daughters to the lower rank at a great price. The other pure Sudras can marry only one wife, unless the first proves barren. Whenever a man, whose birth is esteemed remarkably pure, gives his daughter to a lower person, he receives a present. It must, however, be observed that the Pollob-Goyalas are only allowed Vorno Brahmans, and the Kaibortos have Brahmans, who are not considered as descended from the persons that sprung from the mouth of Brahma.

Of the 900,000 Hindus, which I estimate to be in this district, my assistant supposes that 90,000 are of pure descent; and that, perhaps, 15,000 of these have been born in other districts, and an equal number are of the two tribes Kaiborlo and Khyen, which border on impurity. The impure tribes are divided into two kinds, Nich and Ontyoj; the former observe some rules of decency, and the others are altogether vile. The Nich have peculiar Brahmans who, on account of their instructing low persons, have been degraded even below the pure Sudras. These Brahmans are called in general Vornos; but as the various castes dispute vehemently about pre-eminence, and each pretends to be unjustly considered as impure, no one will employ a Brahman that officiates for those of any other Nich caste, so that each has its own appropriate race of Brahmans. The first five ranks of Niches cannot lawfully keep concubines, marry widows, nor eat or drink what is forbidden to higher Hindus. But the lower orders openly keep concubines, and, except the distillers of liquor,

openly intoxicate themselves. The castes of Nich, that are found in Dinajpoor, are as follows.

1. Money-changers. 2. Goldsmiths. 3. Carpenters. 4. A kind of merchants who deal in grain and salt. 5. A kind of potters. 6. Oilmakers. 7. Fishermen of the Kaibroto caste. 8. Another kind of fishermen. 9. Another kind of fishermen. 10. Boatmen and fishermen. 11. Makers of Lack ornaments. 12. Sellers of prepared rice and sweetmeats. 13. Distillers of spirits.

These may amount on the whole to about 150,000 persons. Many of them are rich, which makes them bear their degradation with impatience; and the women of the money-changers are in general accused of holding their husbands in contempt, and of going astray with persons whose rank is more conformable to their fortune.

There is somewhat more reason in the higher castes abstaining from communication with the tribes included under the general appellation of Ontyoj. These eat many things that are forbidden to other Hindus, although there is a considerable difference in the degrees of indulgence, which these tribes allow to themselves. Some abstain from pork, others indulge themselves in this luxury; while some will even eat the flesh of oxen, which is considered as the utmost degradation of which human nature is capable. They have never been permitted to kill the sacred animals; their repasts, therefore, of this nature have been confined to carrion. The whole, except the washermen, consider themselves as permitted to intoxicate themselves whenever they have a convenient opportunity; and they are not disgraced by openly keeping concubines; nor are their widows disgraced by entering into that state. The Dhobas, Kopali, Chondal, and some of the Muchis have Vorno Brahmans for Gurus. The Patonis, Bhumi Malis, and part of the Muchis have only Vaishnov for Gurus; but Brahmans act as their Purohits. Those of them that belong to Dinajpoor, and who are considered as having had their rank ascertained by Bollalsen, are the following.

1. Washermen. 2. Weavers of canvas and sackcloth. 3. Fishermen. 4. Basket makers (two classes.) 5. Gardeners and farmers. 6. Sweepers and scavengers. 7. Tanners and shoe-makers. These classes, especially the fifth, are very

numerous, and about 225,000 of them are to be found in Dinajpoor.

The whole of these tribes, that I have as yet mentioned, are considered as having belonged to Bengal, when Bollalsen settled the rank of its castes. I cannot, however, find that any book or written regulation was made by that prince; but each caste, which possesses wealth, has persons called Ghotoks, who keep registers of marriages, with the names of the parties and that of their parents, and thus can ascertain genealogies. These are the persons usually employed to make up marriages, as they are answerable for the purity of the parties' extraction. The whole of the tradition concerning the settlement by Bollalsen seems to rest on the authority of these Ghotoks, which perhaps may be doubted; but I have not been able to find one person of this description, with whom I might converse on the subject.

One half of the Hindus in Dinajpoor belongs to tribes which are supposed not to have been settled in Bengal in the time of Bollalsen, and at least 290,000 of these belong to a people which appear to me to have a common origin, and whose features mark them clearly to be of a different race from other Hindus; indeed they are most strongly marked, as belonging to the flat, broad-faced people, which occupies the Eastern portions of Asia. I think it probable that it is since the time of Bollalsen that they have come from the Eastern side of the Korotoya river, or Kamrup, where they are still more numerous than in this district; but all remembrance of the emigration has ceased. It is very possible, however, that they may have been the original inhabitants of the northern parts of this district, which do not appear to have been within the limits of Bollalsen's dominion any more than Kamrup, which I suppose to have been their original country. This, however, I shall probably have hereafter an opportunity of determining. These three tribes are the Rajbongsi, Kongch, and Polya, and consider themselves as distinct; but it is contended by many that they were originally the same, and have now separated in consequence of some of them having adopted, more than others, those manners which Hindus consider pure. This I shall have probably an opportunity of showing to have been the case, when in my next report I come to state the history of Kamrup; I shall

only mention now that the Rajbongsis seem merely to me to be the families of the Kongch, which are related to their princes such as the Rajas of Vihar, Vijni, and Dorong, whose history is tolerably clear; and there are still Kongch remaining who retain a language totally different from that of Bengal, who retain the old simple worship, and have no dealings with the Brahmans. In Dinajpoor, even the highest of them, the Rajbongsis, are reckoned a very impure tribe; but in the countries that are subject to their princes an assertion of this nature would be very imprudent; and it has been discovered that they are Khyetriyos, who escaped from the persecution of Porosu Ram; and that their princes are descendants of the god Sib. The Rajbongsis and Kongch in Dinajpoor drink intoxicating liquors without disgrace, and openly keep concubines; but they abstain from swine and fowls, in which the Polyas are not ashamed to indulge themselves. The principal difference between the Rajbongsis and Kongch is, that the latter condescend to carry the palanquin, which the others do not. All the three are cultivators and weavers.

The other tribes of Dinajpoor, who are considered as not having belonged to Bengal when Bollalsen settled its castes, are as follows:—1. Cultivators from Maithilo, who follow the Brahmans of that nation. 2. Weavers from the west of India. 3. Workers in tin from the west of India. 4. Cultivators. 5. Grass-cutters. 6. Wood-cutters. 7. Workers in ratan. 8. Makers of leathern bags. 9. Snake-catchers, and gelders of animals. 10. Mordah Furash or Mrilop, who remove dead bodies. The whole do not exceed 10,000 persons. The first caste is pure; the two last castes are exceedingly vile, and it may be doubted whether they can be considered as either Hindus or Muhammedans.

Customs of the Hindus.—To give an account of the ceremonies of each or any one of these castes would be endless. In the fifth and seventh volumes of the Asiatick Researches they have been most ably explained by Mr. Colebrooke; and whoever wishes to investigate how time may be altogether wasted, will there see to what lengths the Hindus have carried this science. In the observance of these ceremonies every Hindu, who can possibly spare time, seems to place his chief glory; and he consumes in a most miserable manner the hours that were granted for nobler purposes.

In other matters the Brahmans of Bengal are not near so strict as those of the south. They have allowed themselves a much greater liberty in point of food; and they have yielded much farther to the Sudras, not only in assisting at their ceremonies, but in complying with the common worship by bloody sacrifices. It is owing to this that their law seems to be much more universally observed in Bengal than it is in the south; and that the customs of its different castes have a greater uniformity.

I have already mentioned the foods that are allowed to pure Hindus. The only meat which they commonly use is that of sacrifices, and the only animals that they offer are buffaloes and goats. The impure tribes offer ducks, swine, and fowls; but these two last are reserved for the very dregs of the people, especially the fowls. The ducks are more respectable, and even some pure Sudras are allowed to use them, although they are never confined, nor prevented from eating any impurity.

The extracts of poppy and hemp, and the leaves of the latter, are considered as much more innocent than spirituous liquors; yet they are more apt than even distilled spirits, to lead to the most beastly private intoxication. A Brahman who intoxicates himself with these drugs, is considered as highly blameable, just as a drunkard is with us; but he does not lose caste. Many of the lower tribes use them whenever they can; but it is only the very lowest that will drink spirituous liquors openly; these of course are never used except for mere private intoxication. All women chew tobacco; but it is only those of the unclean tribes, and prostitutes, that smoke. No man, however pure, loses caste by smoking tobacco; and all practice it except a few Pandits, who content themselves with snuffing, which is esteemed more honourable than smoking. Men seldom chew this weed.

Except the bodies of children, the dead of all castes are burned. The higher the caste, the younger are the children that are entitled to this kind of funeral. The body of a dead Brahman of two years of age receives this honour, while burial is considered as sufficient for a low child, until he has reached his fifth year. The funeral pile, however, being expensive, many of the poor cannot be reduced to ashes. A torch, or bundle of straw is kindled, and put to the mouth of

the corpse, with the proper ceremonies, and afterwards, if near a large river, the body is thrown into the water; or if at a distance, it is buried. The first, when practicable, is always preferred, and renders many of the rivers exceedingly disgusting. The expense of the funeral itself is not very burthensome, but the mourning is followed by a ceremony called Sraddho, which is very grievous, and often ruinous. The poorest Brahman of pure birth cannot perform it for less than 40 rupees, and must sell, beg, and borrow, to the utmost of his power, to procure this sum. Even the very low and impure tribe called Patoni, who are basket makers, require to raise 10 rupees for this ceremony, which is the value of at least three months' labour; nor can they be freed from the restraints of mourning until it has been performed.

Men, or rather boys, are always married so soon as they can procure money sufficient to defray the expense, which, except to some of the highest ranks of the Brahmans, are very great, and very frequently involve the parties in ruin. The higher ranks of Brahmans receive a price from the father of their bride, when they marry, and no Brahman can lawfully take a price for his daughter; although of late, this practice, as I have mentioned, is gaining ground. The Sudras, on the contrary, in general, may lawfully take money for their daughters. This sum given by the father either of the bride or bridegroom, according to the custom of the caste, is called Pon; but, except with the Kulin Brahmans, and Kulin Kayosthos, is never sufficient to defray the expense of the party who receives it, although it renders his outlay less burthensome. The charges attending the marriage of a Kulin Brahman, who is poor, cannot, to both parties, amount to less than 300 rupees. A Kayostho marriage must cost at least 150. A tradesman of pure birth cannot spend less than 80; and even a Bhumi mali, the lowest of all castes, must expend 17 rupees, 12 of which come from the father of the boy, and 5 from the father of the girl. The daughters of all Brahmans ought to be married before they are ten years of age, but some indulgence is shown to those of Kulins. Even among the lowest Sudras, both father and daughter are considered as highly blameable if a girl remains unmarried at the age of puberty; for it is scarcely expected that the girl in that case should be able to preserve her chastity. Girls before mar-

riage receive little or no education. Those who are rich, see how their mothers manage their family. Those who are poor must labour, and are taught how to work. In this country, even the women of the Brahmans spin cotton, which, in the south, would be reckoned an abomination. So long as the parents are alive, it is they alone who are consulted in making marriages. Not that a contumacious couple would incur loss of caste; but the man would be disinherited, and both they and the priest who married them, might be fined by their Guru. Before marriage it is not customary for the parties to see each other, nor for their mutual inclinations to be consulted. The Ghotok, or register of pedigrees among the higher castes, and Poramanik, or chief of the caste among the lower, act as agents, and generally settle all particulars, before the bride or bridegroom know anything of the matter. In the selection of husbands, birth seems to have in general a preference to riches, which indeed are little regarded, the urgency of procuring a match at any rate, leaving little room for choice on that point: the avoiding disgrace seems to be what is principally in view. It is lawful for Hindus to marry as many wives as they please; but in fact it is impossible for any, except the two highest ranks of the five tribes, to procure more than one, unless where the first wife has no child; and then the expense becomes so grievous, that none except a few rich persons can procure a second; for in such a case no father will give his daughter without a bribe, and two houses must be kept, otherwise disputes run so high, as to render life intolerable.

No pure Hindu in Bengal can lawfully keep a concubine of any sort, whether he is married or single. But some of the impure tribes allow men to form a kind of left-hand marriage, called Nika, with widows of their own tribe. The contract is accompanied by religious ceremonies, and the same fidelity, both in the man and woman, is expected as in proper marriage (Vivaho); but in general neither the Nika nor her children are so much respected as the virgin spouse, especially if the caste approaches in any degree to purity; for in some very low castes there is little difference shown. This contract is made by the consent of the parties, and may be dissolved at pleasure by either; but this is considered as blameable. In these low caste seven adulteresses may become Nikas, provided

they have only indulged men of their own or higher tribes. A virgin cannot become a Nika. A concubine who is not united by some religious ceremony, is called Dhemini, and no Hindu, except the very extremes of impurity, can live with such a creature, without being in danger of losing caste, should his fault be discovered: but casual communication, especially with a woman of the same caste, does not incur such a heavy punishment, and the lowest castes admit of Dheminis of the same tribe.

Widows, I have already mentioned, are subject to great harshness of treatment, and even in the lowest caste can be married in no way, except by the contract called Nika. The virgin spouses of all Hindus are permitted to burn themselves with the body of their deceased husband on his funeral pile; but the practice is chiefly confined to those of Brahmans, physicians, and scribes. The women of these two last castes are allowed a farther indulgence. If their husband dies at a distance, they may dig a pit, fill it with combustibles, and throw themselves into it, provided they have any article that belonged to their husband, which they can carry with them into the flames. Both practices are exceedingly rare in Dinajpoor, and probably not above one or two sacrifices of this nature are made in a year. If a man leaves children, or brothers who lived with him in the same family with a common stock, his widow is entirely destitute, unless the husband has made a will or donation in her favour before he died; but this is not commonly done, and the widow in general receives nothing more than food, and mean apparel. But if her husband had separated his stock from his brothers, and has left no children, the widow is his heir; and at any rate, if he has children, she is her son's tutor during his minority, which renders her condition tolerable for some years. It is the interest of the wife, therefore, to create differences between her husband and his brothers.

Hindu virgins have seldom an opportunity of misbehaving, because none almost remain unmarried after the age when they are in danger; but widows of all ranks, especially in the higher castes, who cannot hope to become Nika, are very frequently unable to resist temptation. Either virgin or widow who has disgraced herself, whether she is high or low, ought to be excommunicated; but as the disgrace extends also

to the whole family, every pains is taken to conceal the affair, and to procure abortion; for which very violent means are said to be employed, and the higher castes are said to be in general successful; but the lower can seldom procure the means, and excommunicate the woman, who either becomes an abandoned character, or a religious mendicant.

Poor parents, in times of scarcity, may give their children to persons of rank as slaves, and are sometimes induced to sell them to procuresses. This, however, is quite contrary to Hindu law, although such parents are not liable to excommunication. Divorces from a virgin spouse are only admitted in case of adultery, and the wife cannot in any case divorce her husband. Pure Hindus must turn away their wives, if they are publicly known to have disgraced them; but many of the lower castes, provided their fickle wives confine their amours to the caste, rather pay a small fine than part with them, as the expense of marrying again would be intolerable, and it is considered as impossible to live single. In such castes a divorced woman may become a Nika. In cases of divorce the children belong to the father.

All proper Hindus regret, that in these days no caste adheres to its proper duties, but that many persons, in order to procure a subsistence, betake themselves to professions, for which they were not originally intended. In fact the compelling a person, for ever, to adhere to the profession of his father is so contrary to justice and human nature, that it has been found impracticable; and, the Hindus, although with regret, have been compelled to relax the spirit of the law, and even to admit into their written code numerous exemptions; yet every deviation from the strict letter is considered more and more improper, in proportion to the rank of the person, by whom it is made, and to the extent of the deviation. These exemptions, however regretted by well disposed, but over zealous persons, have certainly in a great measure removed, or at least alleviated one strong objection to the institution. Enough of evil still, however, remains behind; for instance the inconvenience, which every Hindu of decent rank experiences in travelling, and in procuring food, which he considers as pure; so that there is scarcely any man of rank, who does not waste much time in the dis-

agreeable and degrading office of a cook, while the least irregularity in his motions, or any extraordinary exertion required, totally deprives him of two or three hours' labour, that he has thrown away on that service, and deprives him of a meal, of which he was perhaps in the utmost need.

The principal evil, however, that the Hindu doctrine of caste has imposed, is the confinement of science to a hereditary priesthood, elevated by birth above the governors of the country. The Brahmans indeed may read some of their books to princes, and other great persons; but the explanation, not only of religion, but of civil law and ethics, was always confined to the sacred order, and supported by divine authority. Of late a considerable relaxation has taken place, although it is severely condemned by persons of strict notions; yet the works, that have hitherto been translated into the Prakrito or polished language, so far as I can learn, are not of a nature to diminish the credulity of their readers, nor to increase either their wisdom, or virtue; and there are still many books kept carefully from the profane, to which on all occasions a reference may be made, as to a superior authority. The state of the knowledge in this district I have already detailed.

The better informed Brahmans may in some measure be called worshippers of two deities, a male and a female. And this doctrine seems to have been pretty generally adopted by all the rude tribes scattered through India, or situated on its frontier, whose poverty has prevented them from receiving instruction. The male is generally considered as good natured, but the female delights in the blood of sacrifices. This simple doctrine the Brahmans have considerably enlarged and diversified. The sexes are considered as forming in some measure one body, which is explained by comparing them with the two lobes (cotyledons) of a pea; but all the Brahmans, with whom I have conversed, consider, that many deities have preceded from these two supreme spirits, and the division into sects arises from its being disputed, which of these inferior deities ought to be the sole or principal object of worship, or which of the deities, universally admitted to exist, is to be considered as the supreme. Some for instance contend that the sun ought to be the principal object of worship, others contend that Sib is the chief god, while

others assert the Vishnu is entitled to that dignity, and one sect gives pre-eminence to the female. In this country there are five sects. 1. Saibo, who consider Sib as the principal god, but always worship this deity in conjunction with the female power. 2. Sakto, who worship chiefly the female portion of the deity. 3. Saur, who worship the sun. 4. Ganpotyo, who worship Ganes. 5. Vaishnov, who worship Vishnu. This sect has branched into two; one worships Ram, the other Krishno.

The members of each of these sects, although they consider one deity as the principal object of worship, and as the chief of the gods, do not imagine, that the other gods have no existence, and occasionally address their prayers to several of them; the whole may, therefore, with propriety, be considered as Polytheists, and the whole are idolaters. A large proportion of the Brahmans, indeed, know nothing of the disputes, from whence the differences of sect have arisen, nor of the more refined doctrines of their sects; and are most implicit believers in polytheism, and in the peculiar holiness of certain images arising from the actual presence of the deity. Of course the Sudras are still more addicted to these errors; but still in general they adhere nominally to some sect. Three of the sects above mentioned contain so few members, that they may be altogether neglected. The sects that are by far the most numerous, are those who worship Sakto among the Brahmans, and those who worship Vishnu, under the form of Krishno, among the Sudras. These last, however, are in general addicted to worship whatever god comes in their way; and, although their spiritual guides avoid the worship of Sakto, yet few of the Sudras are able to resist the temptation. The two principal reasons for this seems to be—first, that Vishnu is considered as a benevolent spirit, while Kali, and Bishohori, two common forms of Sokti, are represented in terrible forms. Secondly, the sacrifices offered to appease the Soktis are a temptation not to be resisted by those, who could eat no flesh, unless they offered it in sacrifice, and Vishnu will accept of no offering of this kind.

It is not indeed to be wondered at, that the followers of Vishnu should ocsasionally pray to the Soktis, in a district, where even Muhammedans adopt this custom, and where

every one in distress, who finds no relief from prayers to his saint, betakes himself to a sacrifice to Kali. Accordingly in almost every village, even where there is not a Hindu, there is a place of worship for this deity. This is in general very simple, being a heap of earth, commonly under a tree, with a stake to which the head of the sacrifice is fastened, so that the neck may be stretched out for decapitation, which is the manner of making the offering. Others are somewhat more improved, and consist of a hut, in which a terrible figure or painting of the deity is suspended, and a few have rude images. Bishohori is the goddess of serpents, and is a very common object of worship, as are also Sitola, Siddheswori, Vriddheswori, and especially Monggol Chondi, all destructive female spirits, considered by the Brahmans, as the same with the wife of Sib, but worshipped by the ignorant as the inflicters of various evils, which they wish to avoid. These are also called the Gram Devatas, or village gods. None of their temples have any considerable establishment; but by far the greater part have Brahmans for Pujaris, or officiating priests. Some, however, of the small places dedicated to Kali are served by very low castes, such as Rajbongsis, or even Bhumimalis. The chief of the village is never Pujari to the village deity, as usual in the south; probably because most of them are Muhammedans.

No music nor dancers are here attached to the temples; but there are many sets of musicians, who are of the lowest castes, and who generally have a boy or two to dance and sing, that are employed in the worship of gods. They are of three kinds; Bishohori and Monggol Chondi, that are employed in the worship of the goddesses, whose names they bear; and Kritons, who sing the praises of Krishno. Several of the low castes have deities, whom they consider as having a peculiar care over them, and that probably were their only gods, before their instruction by the Brahmans; but this belief is not near so common as in the south. The worship, which consists in the votary suspending himself from the end of a lever, by hooks passed through the skin of his back, and in being whirled round before the god in that painful situation, was invented in this district, and is still much practised; but not having had an opportunity of seeing it, I shall only notice some particulars, that differ from those

in the south. First, it is performed by many of pure caste; secondly, it is performed before the images of Sib; both of which would be considered as abominations in the south; but the most remarkable thing is, that the Brahmans, physicians, and scribes, who are almost all worshippers of Sib, abstain altogether from this practice, and the Sudras seem very fond of it, although they are almost all worshippers of Vishnu. The invention is attributed to Ban Raja, who was an Asur or infidel.

Well informed people of the higher rank believe in a future existence, and that it is a state of reward and punishment; but most of the lower tribes, and many even of the more ignorant Brahmans seem to have no belief in this opinion, although in general they have heard of the doctrine, and their worship is performed merely in hope of temporal reward, or for fear of punishment in this life. The lower classes have very little respect for oaths, and the higher believe that no oath can be taken without sin.

There are few castes in Bengal, that have not Purohits from among the Brahmans, unless we exclude from the sacred order the Vyasokto, or priests of the Kaibortos; but among the low tribes of other countries, who have settled in this district, and form so large a portion of its Hindu population, the greater part have not Brahman Purohits.* The impure tribes of Bengal generally employ as Gurus the religious mendicants called Vaishnovs, who from ignorance, however, are often called Brahmans. In this, however, there are great differences. Some persons of these low tribes have proper Brahmans as Gurus; and these observe the Hindu law with regularity; while other persons of the same caste, who addict themselves to impure practices, are not admitted to so high an honour. In this district, in fact, the person who is chief Guru of all those of the sect of Vishnu is a Goswami of the Rarhi division of the five tribes. He is named Otolvihari, and resides at Ghyaspoor in the district of Puraniya, near Gaur. He visits this district annually, performing his office of Guru to the Brahmans. He also employs Odhikaris, or

* In the low castes, the persons who are appropriated to act as Purohits, hold their office by hereditary rank, and are more respected than common.

Brahmans who have been degraded by officiating as priests in temples, to act for him as Gurus for the pure Sudras; and in like manner he employs, as agents for instructing the impure tribes, certain Vaishnov or other Sudras, who have separated themselves from their families, and have dedicated themselves entirely to God. His annual profits are said to be about 12,000 rs., and his office and rank are hereditary.

The Guru instructs the Hindu in a proper form of prayer, and this instruction is called Upodes. He also accepts of presents on various occasions. Some of the Goswamis have authority to punish low people, for transgressions against the rules of caste, by fine and excommunication; but this power is not general, and does not extend to the higher castes. The Guru, however, in all ranks, receives the greater part of the fines, that are levied on those who offend against the rules of caste. The Gurus in Bengal do not seem to occupy so high a station as in the south, but they have very considerable emoluments. A man, unless he is of a narrow disposition, should give his Guru one-twentieth part of his income, but many give less, and many a great deal more. There is no written regulation for this, the whole contribution is voluntary. The Purohit reads prayers on various occasions. If the prayers are portions of the *Bed*, the Sudra is not allowed to repeat after the priest; but there are parts of the service that the Sudras are allowed to utter. They understand no part. The usual proportion of the Purohit's emolument is about one-half of that, which the Guru receives. Both Gurus and Purohits, not only of the impure, but even of the pure Sudras, are in general so ignorant, that they cannot read the ceremonies, which are in Sanskrita, and none of them understand a word of these writings. The prayers are commonly repeated from memory. Even among the Gurus and Purohits, who officiate for the Brahmans, there are many who do not understand the obsolete language of the Beds, from whence a great part of the Hindu service is extracted.

Among the Brahmans of Bengal, there are very few who forsake their families, and dedicate themselves entirely to what is called the service of God. Their law however admits of the practice, and allows them to be divided in consequence into four states or conditions (Asrom). Between the age of 9 and

11 years, when a boy is to receive the thread, which he is to wear as the badge of his dignity, he ought to pass some time in the most intense study, and severe practice of religious duties. In this state he is is called Brohmochari. In general they content themselves with two or three hours of these exercises, and none protract them beyond 10 days. They then receive the thread with innumerable minute ceremonies, and enter into the state called Grihi, or persons living in a house with a family. When a man's father and mother have died, and if he has children, when these have grown up, or when he is 50 years of age, should he be desirous of acquiring more holiness, he may retire into woods or solitary places, and live with holy persons in the state of a Banoprostho, which may be translated hermit. The number of these among the Brahmans of Bengal is exceedingly small. They employ much of their time in pilgrimages, and in general have converted their effects into money, on which they live; although some trust to alms for a support. Most persons indeed who now betake themselves to this life, are men who have lost all their near relations. Those who wish to obtain greater favour from heaven, take upon themselves the state of Dondi. They throw their badge of honour into the fire, shave their heads, throw aside all their clothes, except what decency requires, and all their effects except a staff and an earthen pot for drawing water. They no longer kindle a fire to prepare food; but take whatever a Brahman gives them to eat. By the rules of the order they are not allowed even to think of any thing that would give them pleasure; and in fact ought to be most egregious enthusiasts. The practice, owing perhaps to the good sense of the Brahmans of Bengal is very rare; and the persons who adopt it, retiring to other districts, the fanatical multitude would be destitute of a supply sufficient for their silly admiration, had not several interlopers from the west made their way into the district. Of these I shall give some account, only previously observing, that among the natives of Bengal there are no gymnosophists, this extravagance seems to be confined to the west.

Among the followers of Vishnu there are two sects; the one worships Ram, the other Krishno; for the other incarnations (Avatars) of that deity are not worshipped by the Hindus. In Bengal the former conceal their sect, as much as

the worshippers of Sib, Sokti, Gones, or the sun; but near Oydhya or Oude, the city of the hero, and in other parts of the west of India, the worship of Ram is openly professed. Many young Brahmans are there dedicated to the service of the deity, relinquish the world, and take the name of Ramayit or Ramanondi. Of these there are a considerable number in Dinajpoor. They live in small convents (Akra) of five or six persons, under the authority of a Mohonto, who before his death appoints a successor, giving him the proper secret instruction (Upodes). A description of one of these convents at Nimnogor in the town of Dinajpoor, may serve to give an idea of the whole. It consists of six huts, like those occupied by wealthy farmers. One of them, which serves as a chapel (Devalyo), is rather larger than the others, and contains images of Ram or Roghunath, of his brother Dokhymon, of his wife Sita, of his servant Honuman, and of Gopal or Krishno, another incarnation of Vishnu. The first and last are made of black stone, the others are of a composition called Oshtodhatu from its containing eight metals. As objects of worship there are besides 32 Salgrams, or sacred stones representing different gods of the side of Vishnu. Four of the other houses are appropriated for the accommodation of the persons belonging to the convent, and of any strangers (Hindu) of rank; and a small house is left empty for persons of low birth, or even for Muhammedans. The original endowment for this Akra was 45 bigahs (between 19 and 20 acres) of land, of which two contain the buildings, and are surrounded by a mud wall. Besides this the Rajas allow it a rupee daily; but on the decay of the family this has been stopped. Belonging to this Akra there are five Ramayits, one of whom is Mohonto or chief. Although they neither are of the five tribes, nor Baidiks, they are Brahmans of Kanyokubjo, and took the vows of celibacy when they were children, and are much venerated by the people. They possess little or no learning; but read some Montros or forms of prayer; and they eat with no persons, but those of their own description. The Guru of the order (Janokidas), lives near Joypoor. Some two or three of them remain in the Akra, while the others travel about soliciting alms; but they obtain nothing that can enable them to live with any dignity. Five or six rupees are considered as a handsome offering from a

rich man. While wandering about, they generally sleep at some other Akra; but seldom receive any food. They have only one servant who keeps their ground, and takes care of three cows that give them milk. Some part of their ground is waste, and a good deal is occupied by bamboos, mangoes, and jak trees, which give them considerable profit, as they sell the bamboos and the long grass that grows on the waste land, which is used for thatch. They cultivate a small proportion of their ground by means of Adhiyars, who undertake all the expense and trouble of cultivation, and give the proprietors one-half of the grain produced, and the whole of the straw, which feeds their cows. Their servants' allowance is eight rupees a year, and his food. This servant cultivates the garden, which produces vegetables (Turkari) for the use of the Ramayits. Those that are present, daily wash the gods, adorn them with oil, sandal and flowers, offer them boiled rice and sweetmeats, and read Montros or prayers. They also burn a lamp before the images, and offer incense (Dhup). When they die, they are burned, and their companions mourn (Osauch) for 13 days, in place of 11, which common Brahmans use. They never shave their heads.

The celebrated Sangkar, when he came into the north of India, introduced the order of Sannyasi, as he had done in the south. Many of these Sannyasis, who are Brahmans of Kanyokubjo, frequent this district, where they are usually called Goswamis or Gosaing; but, as I observed before, they must be carefully distinguished from the Goswamis of Bengal, who are worshippers of Vishnu, and married; while those of the west are worshippers of Sib, have taken vows of celibacy, and are dedicated to the service of god when young. In general, however, they pay very little attention to the rules of their order. Most of them are rich merchants; and, although they live in houses, which they call Akras, are generally supposed to have female companions. Several have even entered into our military service, and are commonly alleged to be more than usually insolent and rapacious in the villages, which they enter without their officers. Except the few, who adhere more strictly to their rules, these are little respected. They have no sort of communion with the five tribes or Baidiks of Bengal, although these also are Kanyokubjo Brahmans. Among these Goswamis of the west, there are however many

Rajputs, and others who pretend to be of the Khyetriyo caste.

The Sudras of Bengal are not excluded from dedicating themselves to the worship of God, and the very lowest of the impure tribes may attach both themselves and their children, for ever, to the kind of priesthood, or order of mendicants called Vaishnov, or Vaishnom. In Dinajpoor these are exceedingly numerous, and may be divided into three kinds. First those who have assumed this order recently, are very little respected, and cannot procure by begging more than a mere subsistence. A great part of them are persons who have lost all their relations, widows who have had children, and common prostitutes who repent of their profession, or are no longer able to procure a support by its means; but there are some also, no doubt, who are actuated by more worthy, although mistaken motives. In order to be received into the order, 1¼ rupee must be given to the Goswami, who is Guru, and this is a considerable restraint. The whole of this class, however, can scarcely be considered as entering among the proper Vaishnovs; but their children after one or two generations arrive at the full dignity, and form the two remaining classes called Grihi and Udasin. The former, like the Grihi Brahmans marry, and live settled lives in their own houses, although man, woman and child among them are impudent beggars; and as they are much respected by the lower ranks, they procure a subsistence that is rather comfortable, and live like farmers, who keep two or three ploughs. Besides begging, they make beads from the stems of the Tulosi (Ocymum Sanctum), and of common flax, and of the wood of the Billo (Cratæva Marmelos), the Sriphol (Cratæva religiosa), the Dude, and Indrojov (Nerium Antidysentericum W.), which they sell; for every Hindu, except a Brahman, must have beads round his neck, otherwise he cannot lawfully drink water. Many of the Vaishnov besides are among the musicians (Kriton), who celebrate the praises of Krishno; for they are all worshippers of that incarnation of Vishnu. These professions are considered as lawful; but some have accumulated stock, have taken large farms, and degrade themselves by cultivation. Some of them can read; and a few understand Prakrito, and peruse the book called Chaitonyo Choritamrito, which was composed by a pious physician

named Krishno Das, who was contemporary with the two Brahmans, that introduced the worship of Krishno among the five tribes. The Udasin Vaishnov, like the Dondi among the Brahmans, dedicate themselves entirely to the service of God, and retire from their families to live in convents (Akras); but like their betters they seldom do this, until age has considerably moderated the strength of appetite for pleasure. They are very much respected, and serve as Gurus for the impure tribes; but in general act merely as agents for the Goswami Brahman, who of course has the lion's share of the profits. The Vaishnom or Satananas of the south very much resemble the Vaishnov of Bengal; but they hold a higher rank, and are the garland-makers of that country, a profession which here forms one of the nine pure castes (Malakar) of tradesmen.

The number of Vaishnov is not however sufficient to consume the pious charity of the worshippers of Vishnu in Dinajpoor, and a considerable number (perhaps 500) of Vairagis come from the vicinity of Mothura, where Krishno reigned. These live in convents (Akras), and follow nearly the same rules with the Udasins of Bengal. The chief of a convent of Udasin is called Odhikari; but the Vairagi prior is named Mohonto. Neither have any endowments in land.

Except among the physicians and scribes in Bengal, there is few or none of the Sudras who worship Sib; and none of these two castes dedicate themselves to God, whether from superior understanding or some other cause I cannot say. I can scarcely, however, attribute it to the first cause; for they venerate in the highest degree the Khyetriyos Rajputs and Sudras of the west, who have dedicated themselves to the service of God, who have separated themselves from their families, who worship Sib, and who are called Yogi or Jogi, to which the term Kanphata is usually prefixed, from their having their ears distended to a very great size by means of wooden rings. They trace their origin to the celebrated Sangkar, and have their most numerous establishments in Lahor. In Dinajpoor they are not numerous. I saw only one convent, which they call a Ghopa. It had a neat, small temple (see *wood cut*, page 668), some comfortable houses although thatched, and the occupants were neither old nor austere in their manners. They were exceedingly respected; and a

neighbouring Kayostho, in other respects a sensible man, declared to me that he considered them as far superior to any Brahman, and perfectly equal to Vishnu, Sib, and Brahma.

The Hindus in Bengal as elsewhere, in order to preserve the purity of caste, by punishing such as transgress its rules, form themselves into companies, which in Bengal are called Dol. Very considerable differences, however, exist in the manner in which these companies are formed. In Bengal a Hindu may enter into any Dol that he pleases, and which will admit him; and his rank is in some measure estimated by the company he frequents, as he would be expelled by the company should he do anything contrary to its regulations. There is no necessity for all the persons being of the same caste. The Baidiks of Dinajpoor will not enter into the same Dol with any Sudra. The two highest ranks of the five tribes, and those who are most esteemed among the third, admit only the physicians and scribes into their company; which requires that on certain occasions they should visit in their houses, and then eat sweet-meats, curdled milk, and other things, that do not require to be prepared with fire. The lower part of the third rank of Brahmans admit the pure Sudras of the nine tribes, and also Telis, Tamolis, and Moyras.

At the head of each Dol is a chief (Dolpoti), whose office among the higher castes is hereditary, and whose duty it is to punish all transgressions, either by excommunication or fine, according to circumstances. The first operation is to turn the offender out of the company. He of course implores to be re-admitted; and then the Dolpoti determines whether or not this can be done, and on what terms; and the re-admission is always accompanied by an entertainment for the company. The power of the Dolpoti, however, is not arbitrary, as his decisions must be guided by the consent of the principal people of the company, which in Bengal is called a session (Baitok). His influence, however, is very considerable; as he expends much money in entertaining the company. Frequently indeed his profits are great in proportion, especially in large towns, where breaches of the law are common, and where the people are rich; and there he sometimes procures great wealth. Should the Dolpoti become poor, and unable to entertain, he is deprived of his office, and another

is elected. No transaction of importance that can affect caste, such as a marriage or feast, should be undertaken without informing the Dolpoti, in order that he may know whether anything improper is going forward. The number of assessors does not seem to be fixed, nor is there any regular election. From five to ten of the men who are most esteemed for learning, wisdom or riches, assemble to assist the Dolpoti. Among the higher castes they are called Visishtos; but among the lower castes they are called Prodhans or Raymaniks; and in many castes every head of a family obtains these titles.

In large places there are two or three principal Dolpotis, whose companies in general quarrel, and endeavour to do each other all the ill offices that they can. Each caste, when it is numerous in any place, has besides one or more Dols or companies for enforcing the observance of its peculiar rules. Each kind of Brahman and each caste of Sudras has its own, and most of these castes are subdivided into several branches that dispute about precedence and purity, and that cannot intermarry, and each of these subdivisions has usually a separate chief. In the various castes the chiefs of companies are called by various names; the most common is Poramanik. His authority is similar to that of the Dolpoti. In some of the lower tribes, such as basket makers (Patonis), the office of Poramanik is elective, and his power is restrained by that of the Guru, whose confirmation is necessary to render the election valid, nor without his consent can any person be excommunicated or fined. These two last rules are generally observed wherever all the members of a company have the same Guru. The faults usually punished by these sessions are eating forbidden things, or with forbidden persons, and cohabiting with those who are impure or forbidden. Persons also who have been convicted by the magistrate of theft or perjury must pay, according to circumstances, before they are received into their company.

Various small Sects.—The followers of Muhammed and of the Brahmans compose almost the whole population of Dinajpoor, so that I shall have little or no room to say anything concerning other religious opinions. Among the natives Christianity may be said to have made no progress. There are no native Portuguese, and no trace remains of the labours of Mr. Carey, although he resided for some years in this

district, and his zeal and abilities are well known. His successor in the mission, Mr. Fernandez, a native of Portugal, who, I believe, was once intended for a popish priest, has had very little success, although he is a person of very good address, with some propensity to turn everything into the wonderful, which cannot fail to be of use with such a people. His converts are five, and two are married and have families. One of them can read the scriptures in the language of Bengal, and endeavours to instruct his countrymen; but by the other natives the conduct of the converts is beheld with the utmost abhorrence.

Many agents and persons belonging to a people called Oshoyal frequent this district as traders; but have not taken up a permanent residence. They seem to form two tribes. At the head of one is the house of Jogot Seit, the chief banker in India; and these are commonly said to be Jains. At the head of the other tribe, who are usually called Kengiya, and who are extensive traders in grain, is a person named Bhoj Raja. One of his agents said, that he worshipped Gautam; but I met with no priest nor intelligent person who could give me any satisfactory information.

A good many Siks frequent the district as merchants; but I have no information to offer concerning them, as I found no priest nor well informed person to give me an account of their customs. They have, however, a meeting (Songgot or Dharmasala) at Dinajpoor, where they assemble to worship morning and evening, and where travellers of the sect are received. At Maldeh was formerly another meeting, but it is now abandoned, and only one old woman remains in the place.

CHAPTER VI.

NATURAL PRODUCTIONS OF DINAJPOOR.

Animals that are found wild in this district are of little importance. I observed only one kind of monkey, which has a tail that reaches below the knee, but not to the heel, and is called Morkot, by the natives. Its hands are black, and the callosities on the buttocks are brown. When old, the face and buttocks become red. It seems to be the Simia Rhezus of Audibert, and the *Macaque a queue court* of Buffon. The younger animal, thè face of which is not red, seems to be the *Patas a queue courte* of this great naturalist. In the district of Dinajpoor, monkies are neither numerous nor very troublesome. Those that I saw were in the woods near Peruya; but I was told that the greatest number is to be found near Nawabgunj. They assemble there on the banks of the Korotoya, and collect the fruit of the Singgur (Trappa). According to the natives, after having procured a quantity, the monkies divide the spoil, and bathe, and then each eats his share. This is probably an idle story, such as are usually current concerning the manners of different animals.

The wild elephant and rhinoceros can scarcely be said to be known. Two wild elephants certainly made their appearance in the forests of Peruya in the year 1806, and remained there a rainy season. They were seen by many, and are said to have killed some people, who straggled near them. It was supposed, that they were accompanied by a rhinoceros, for what reason I cannot say, as this animal, so far as I could learn, was not seen, and does not usually frequent such company. The elephants had probably wandered from Morong. A thousand idle stories were immediately circulated. It was said that they were the actual elephants, which had belonged to Bhim Raja, the son of Pandu, who lived about 5000 years ago. Two elephants, to a multitude of people who chose to assemble and attack them, are not at all formidable; and these invaders ought to have fallen an easy prey, had the people been led to the attack; but no officer of police, nor land-

holder, took any pains, and what is everyone's business, is commonly neglected. They were allowed to ravage at pleasure, and occasioned great dismay, so that several villages were deserted. The only step taken was a grand sacrifice, to which even the Moslems contributed. Twenty or thirty Brahmans received a sum of money, and performed a grand ceremony, which was effectual, as the dry season approached.

The jackal, and Indian fox (Canis Bengalensis, Pennant), are very common, but harmless. I heard of no wolves nor hyænas. Tigers and leopards are not numerous; as they therefore have an abundant supply of food from the cattle which feed in the woods, they very seldom attack men. Although they frequent the neighbouring woods, and even the streets of Ghoraghat, the people walk alone through both, even at night, and I heard of only one person in the whole district, who had been killed in the course of the year. It was in this district, where a white animal of this kind was killed some years ago, the skin of which having been sent to Europe by Lord Wellesley, occasioned a dispute whether it was that of a lion or tiger. No such animal has been seen before nor since. Mr. Tucker, an indigo planter of this district, declares, that in a wood near Lalbazar, he saw an animal resembling a tiger in size and colour, but it had a mane like a lion. I offered a considerable reward for it, dead or alive, but without success; this, however, is no proof of its not existing, as I found the people totally unwilling to bring even fish, plants, or any other natural production. At Ghoraghat I heard of a small spotted animal of the cat kind, called Nakeswori, which is said to be common in the neighbouring woods, where it lives on trees. No offer of reward could induce the people to bring one. This perhaps may be the Serval, an animal which I have never seen. I have not been able to learn that any where in India there is such an animal as the panther.

The Indian ichneumon is very common, but is seldom tamed. Otters are so numerous that their fur might become an object of commerce; but there is no person here who understands the method of taking them. So far as I can learn, it is practised by the people of Dhaka alone. Bears (Ursus labiosus B.) are not numerous nor destructive, and are found chiefly in the ruins of Peruya. Where the soil is loose and

sandy, the common porcupine is abundant, and even destructive; as it prevents the cultivation of turmeric and ginger. It may be eaten by Hindus of all ranks, and some that I had caught, were disputed for with great eagerness by the people; yet these animals are seldom molested. Rats and mice are by no means so troublesome as in Europe. Hares are very numerous, and easily caught; yet, although they are considered as pure food, they are seldom molested. When a man wishes to give a feast, he sends out some people with poles, who surround the long grass, and knock down as many as are required.

There are many deer in the vicinity of the Mohanonda, and of the lower parts of the Punabhoba and Tanggon; but scarcely anywhere else. They are so numerous among the long reeds and woods of these parts, that they are a nuisance by destroying the crops. I saw no kinds except the axis and porcine deer; and in this class of animals the natives apply specific names so indefinitely, that I cannot follow them as guides. There are no hunters who make a profession of killing these deer, and carrying the venison to market, although no one would hinder them. The neighbouring farmers keep nets, and occasionally hunt, partly to save their crops, and partly to procure animal food. I went twice with them, and on one occasion took two deer, and on the other had no sport. I was a good deal surprised at the method. The net is made of whip cord, and may be about six feet wide, and each farmer brings a piece with him of 30 or 40 feet in length. All the pieces having been joined, they are set in a straight line, and are supported on one edge by poles, which incline towards the direction from whence the game is expected to come, and lean on forked sticks. Some persons then remain behind the poles, with lances, to kill or seize the game, which comes into the net, before it can disentangle itself. The others advance from the net in a line parallel to it, and beat the grass and bushes, and make a great noise. I expected, when they had set the net, that they would have gone in silence to a distance, and have roused the game, as they advanced towards the net; but this, they assured me, would not answer; for the game always runs backwards in the direction from whence the noise advanced upon it. The game taken in these nets consists of wild hogs, deer, and tigers. I saw no antelopes, but there

may be some; as by the natives they are confounded with deer.

The wild buffalo, exactly of the same kind with the tame, is very common, and exceedingly destructive; nor has any considerable exertion been ever made to free the people from this evil. The animal is too formidable for individual effort to produce any good, and the property of the landholder is so much intermixed, that the endeavours of any one of them would have little effect, provided his neighbours contributed nothing. Many indeed are said to levy money from their tenants, under pretence of hiring armed men to kill these animals; but very few hunters are employed. I inquired everywhere after such people, but could find none except in two or three places, some of whom were employed by the judge. Unless the destruction of these animals becomes an object of police, and unless the expenditure of the money raised be carefully checked, no hope of success can be entertained. I have indeed great doubt how far any exertion will be entirely sufficient, unless the woods and reeds which give them shelter are removed. The wild buffaloes usually go in small herds, and may be easily killed by means of muskets, or poisoned arrows. These are the only effectual means for destroying the breed altogether; but others are employed for procuring the animal; for it is eaten both by the Muhammedans and by the lowest tribes of Hindus. They are sometimes caught in pitfalls, or by a noose suspended between two trees; but they are a shy sagacious animal, not easily deceived. The natives near the lake at Bamongola, when they find a herd swimming, attack it with boats or canoes, and having seized on the hindmost buffalo by the tail, dispatch him with a large knife. In the same vicinity, the keepers of tame herds are said to be sometimes able to secure wild males, by means of trained females, which surround the male until a keeper comes up, passes a rope through the septum of his nose, and then the females push him towards a tree, where he is fastened until tame. The bulls thus caught are reckoned more valuable than such as have been born in the domestic state; but I believe the practice is very uncommon; I heard of it only at Bamongola.

The wild hog is by far the most destructive animal in the district, although never of a size to be formidable to the vil-

lagers, if armed with pikes. Near many woods they are almost innumerable, and in some places seem to be gaining ground. All that I have said concerning the destruction of the buffalo, is applicable to that of these animals; and it seems an object worthy of the most serious attention from the police; circumstances should direct whether it would be most advantageous to make a general hunt, or to levy a contribution with which regular hunters may be hired. I should in general prefer the former, because at convenient seasons all persons may turn out for a day or two without inconvenience; and because it can never be the interest of the regular hunters to extirpate the animals. The wild hog is often hunted by the low Hindus for food. He is sometimes caught in nets like deer, at other times he is pursued with the common curs of the country, which run round him barking, and thus keep him at bay, until their masters come up, and dispatch him with arrows and spears.

Porpoises are pretty numerous in the larger rivers, but are not applied to any use. No birds are caught for being trained to sport. At present indeed it may be said, that the natives have no turn for any of the amusements of the field. A late Raja spent large sums upon it; but almost all the people whom he employed, have disappeared. There are no parakeets, nor birds that are commonly caught for being tamed; and, except about Maldeh and other places of much trade, few tame birds of this kind are kept. Although the country swarms with water fowl, both web-footed and waders, the natives derive from thence little or no resource for their tables. The common wild goose (Anas anser) is exceedingly abundant in the cold season, and remarkably good, but is never used; and there is a great variety of ducks and teals, with abundance of snipes, that are equally neglected. When a very extravagant man, at Dinajpoor, wishes to give a feast, he hires some people to catch birds with a rod, and bird-lime. Those that are preferred, are three birds of the Cormorant, or shag kind, called by the natives Panikauri; several small herons, included by the natives under the general name of Vok; several birds of the Jakana and Gallinule kinds, included under the native term Jolpipayi; but above all the common house sparrow. This indeed being considered as possessed of aphrodisiac qualities, is in request at all times. The peacock is very common in the woods, and in many

places so numerous as to be destructive to the crops; but on the whole the people of this district have little to complain of the feathered tribes, and neglect the luxuries of that kind which nature has poured forth in abundance.

Several kinds of tortoise are more eagerly sought after; but, to European taste, they are execrable. Frogs are not eaten by any of the natives, but some lizards are used in food. The crocodile is common, both in rivers and tanks, but few accidents happen from his violence.

At the season when I visited the district, serpents had retired into holes in the earth, and were very rarely seen; but in the beginning of the rainy season, they are driven from their lurking places, and fly for refuge into the huts, and higher places near villages. At that time accidents are common, and a good many perish every year from the bite of these vile reptiles. They are supposed to be under the immediate direction of the goddess Bishohori. In the dangerous time, many sacrifices are offered to her images, and people are employed to sing her praises to music. Many persons are supposed to know spells (Montros), that will cure the bites of serpents; and I was gravely assured, by both Moslems and Hindus of the highest rank, that they had known these forms of prayer tried with perfect success. Dumdumah is one of the places most infested with serpents, especially with the different kinds whose necks swell, and form what is called a hood; and all of which are exceedingly venomous. There are a few of the people called Byadhs, who catch snakes, which they tame, and who are supposed to be possessed of a charm, which prevents them from being bitten. This charm, I know, consists in a blunt rusty knife, with which they scrape out the animal's teeth; the fellows, however, possess a great intrepidity in seizing these formidable reptiles, and great impudence and dexterity in deceiving the people.

Fish, forming by far the greater part of the animal food that is consumed in the country, the fisheries deserve particular notice. The demand being very considerable, and the supply being rather scanty, there is none exported, and salt is too expensive to admit of its being used in curing fish. The whole fish caught are therefore consumed in the country, and none are imported. During four months of the

year, when the rivers are much swollen, fish is very scarce, for the animals have then such an extensive range, that they are not easily caught; but as the inundations subside, and when the fish are confined within narrow bounds, they are easily secured by various simple means, which the natives employ; and a very large portion of those taken are secured, when they may be said to be almost left sticking in the mud; or by means that in most countries would be quite ineffectual.

The most simple method, when a pond, ditch, or marsh has become nearly dry, and the fish of a large space have been collected into a small pool, is to divide it by dams of mud, and then, having thrown the water from each successively, to catch the fish as they are left dry. This is usually practised by all the poor labourers, especially in the ditches and pools near the rice fields, which are not let to fishermen by the landholders.

It must be observed, that in about six weeks after the rainy season commences, every rice-field, although quite dry and hard in spring, abounds with small fishes. They are certainly most numerous near rivers and marshes, from which they in general come; but I am inclined to think, as I observed in Mysore, that the eggs often continue dry in the field, and are hatched after they have been moistened by the rain. The natives account for their appearance in such places by supposing, that they fall from heaven with the rain. The clerk (Muhurer) of the division of Rajarampoor assured me, that he had often seen them leaping among the grass, as the shower fell. In fact a person, who is well disposed, can see any thing; like a very good Danish naturalist, who imagined, that he saw a fish gravely walking up a tree; for he had been assured by the natives, that such was its common practice.

Where the water is deeper, and communicates with a large extent of low land, this method is improved by enclosing a square piece of shallow water, perhaps 15 feet in diameter, with a mound of earth, and leaving an opening of about 3 feet wide in the side next the deepest water. The space within the dam is then filled with branches of trees, which attract the fish. After the branches have remained for some

days, the opening is shut with a dam, the branches and water are thrown out, and the fish are secured. This also is chiefly practised by those who are not regular fishermen; but when this plan is farther improved, it becomes one of the most effectual means of procuring fish, that are employed in this district.

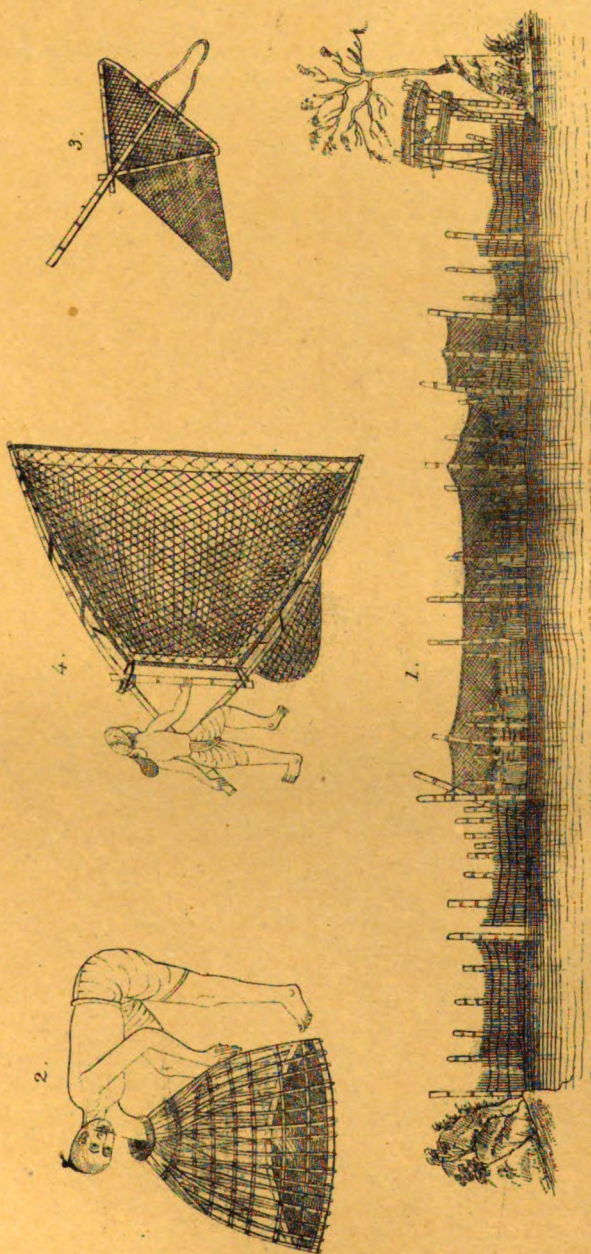
In the old courses of rivers called Bil, or in the courses of such as have little current, a large quantity of branches and twigs of trees are tied together, and thrown into the water, so as to occupy a space of 20 or 30 feet square, from the bottom to the surface. After they have remained for from 10 to 30 days, and the fish have entered into all parts, the branches are surrounded by a kind of screen called Byana, which is made of reeds (Ikiri) tied parallel to each other by means of twisted grass (Kese), and placed so close, that the smallest fish cannot escape. The screens are about 4 feet wide, and of length sufficient to surround the whole heap of bushes. When this has been done, the bushes are thrown out, and the fish are secured by small bag-nets (Chakoni), the mouths of which are fastened to hoops.

The Byana or screen is sometimes used without having previously thrown in branches of trees. This is done in shallow water, where there are many weeds. A space is surrounded by the Byana, and all the fishermen go in with bag-nets, and secure the fish. This kind of fishing requires about seven men, who usually have two heaps of branches in the water, for nine months in the year, or from about the middle of October until the middle of July, when the country becomes too much inundated. They draw one of these Byanas once a week, and in the intervals of this labour surround small spaces, as above mentioned, where no branches have been placed. These same fishermen employ a kind of traps called Onta, which are made in form of a truncated cone, 4 feet high, and from 18 to 24 inches wide at the bottom. These traps are made of reeds in the same manner with the screen, and the two edges are not fastened together, but are bent in towards the cavity, so as gradually to approach each other. The fish can readily force its way into the cavity, but his efforts to come out are vain. The fish are directed to the opening by a screen placed on each of its sides, and

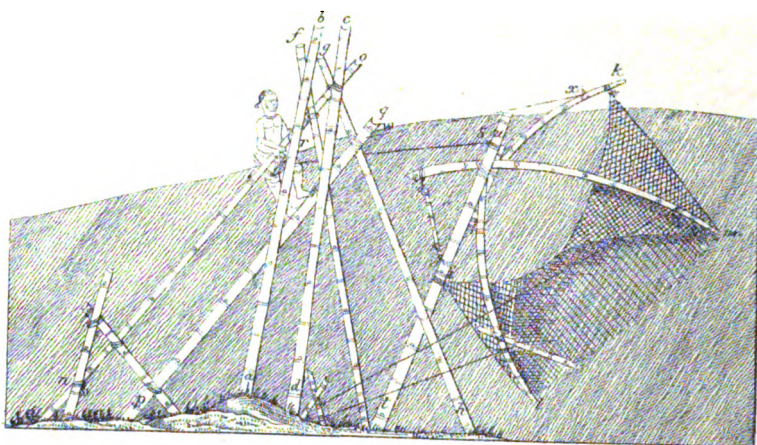
according to the situation of the fishery, these are disposed in two manners.

The one is used during the dry season in shallow water courses that are stagnant, or contain but little stream; and in such situations the screen extends the whole way across, and has traps at the distance of every 20 or 30 feet. In the one at Akhanogor, from which the drawing (*Plate* 6, No. 1) was made, and which was about 300 feet wide, a net was suspended over the screen, in order to prevent the fish from leaping over, for some of the carp kind leap with an agility equal almost to that of the salmon. This apparatus, called a band, procures a great many small fish, and is usually rented for a certain sum.

The other situation chosen for this manner of fishing is much more common, as during the rainy season it is the only way in which these fishermen can procure employment. The screen is placed on the shelving side of a river with one end to the shore, and the other as far into the water as possible; but it cannot be placed where there is a greater depth of water than four feet. Such a screen admits of one or two traps, according as the water deepens more or less suddenly; and one man manages two screens. The fish caught in this manner are much smaller than by the other method; but the quantity makes up for this defect. These fishings with the Byana and Onta are very productive, especially in the southern and western parts of the district, and require no boats.

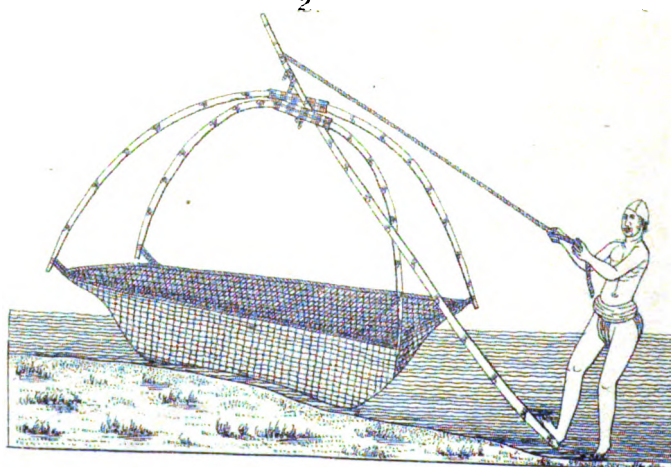
Still more simple traps are used. One called the Polo and Tarpa (*Plate* 6, No. 2.) is a basket with a hole in the bottom. In shallow water the fisher puts the mouth on the mud, and then, passing his arm through the hole in the bottom, gropes for the fish, which he may have secured. Another called Jakoyi, is a basket of an irregular three-sided form, open at one end, and has a bamboo shaft (*Plate* 6, No. 3). The fisher places the bottom flat on the mud, treads among the weeds before the opening, thus drives the fish into the trap, and then suddenly raising the handle brings the opening above the surface. These two methods can only be practised in very muddy places covered with aquatic plants, and are commonly employed by labourers of the lowest rank to catch fish for their own use.

N° 1. An Apparatus for catching Fish, called "Band". — 2. Instrument used in Fishing, called "Polo." 3. Another, called "Jhatroye". — 4. A Fishing Net, called "Besal".—

London. 1838. W. H. Allen & Co. 7 Leadenhall St.
J. Netherclift Lithog:

1.

A Chawri, or Khora.

2.

A Chak, or Jhati.

London. 1838. W. H. Allen & Co. 7, Leadenhall St.
J. Netherclift Lithog.

The most simple net in this country is the Besal (*Plate* 6, No. 4.) which is stretched between two bamboos, that meet behind at an acute angle (about 75°.), by which the fisherman holds. The net is of a triangular form so as to apply to the bamboos, but is much bagged behind. The fisherman, walking up to the middle in the water, pushes the points of the bamboos along the bottom for a little way, and then raises them up to secure whatever fish may have come into his net. The bamboos are from 12 to 15 feet in length.

The same form of net is enlarged so as to have bamboos 19 cubits long, and is then used in a boat. A rower at each end manages the canoe, which is kept broadside on to the stream, and allowed to descend with it, and a third man lowers the points of the bamboos, which are fixed at right angles to the gunwale, and then occasionally raises them to secure the fish. This is one of the most common nets used by fishermen. Its mesh is small. The boat is 16 or 17 cubits long by 2¾ wide, sharp at each end, and broadest abaft the middle. At the widest part of the boat two forked sticks project between 3 and 4 feet, outwards and upwards from the gunwale, and a stick lashed between the forks serves as a lever, over which the bamboos of the net are raised and lowered. On the gunwale opposite to the net is a small outrigger, which serves as a balance. This kind of fishing may be carried on at all times, but the rainy season is the most favourable. Most of the fish caught in this manner are of the crustaceous kind. On the Mohanonda a boat built of sal will cost 20 rs., and will last 15 years; but it requires considerable repairs. The net is usually made of son, but sometimes of cotton, and were it sold, is worth 10 rs.; but the fishermen usually make it themselves, and it costs only the materials.

The same kind of net is still more enlarged, and is raised by a complicated machinery of bamboos, see *Plate* 7, No. 1. It is called a Chauri or Khora, and is fixed on the steep side of some river. A frame of four strong bamboos (*a, b, c, d, e, f, g, h,*) supports the net (*i, k, l, m,*) placed with its descending edge (*l m*) towards the mouth of the river; and also supports two sloping bamboos (*n, o, p, q,*) on which a man walks, who has one end of a long rope (*r s*) round his middle. The other end passes over a bamboo, for they have no pulley,

and raises the net, when the man walks down, and lowers it into the water, when he walks up the sloping bamboos. The moving power is increased by a lever of bamboo (*t u*) the heel of which (*t*) rests on the bank, while the rope from the man's waist is fastened to the other end, and that again is connected with the bamboos of the net. This is the most complicated machine that I have seen the natives employ, and seems to me very ill contrived. I regret that my draftsman's want of skill in perspective will render the drawing scarcely intelligible. The net is quadrangular. Two corners (beyond *l m*) are stretched to the bamboos; one of the other two corners (*i*) is fixed to the bamboo lever; while the other (*k*) is fixed to the end of a bamboo, that projects over the river, which is fastened to where the lever and the two lateral bamboos (*r*, *m*, *r*, *l*,) join, and which is suspended by a rope (*w x*) from the frame, so that this corner should always be high. Ropes (*y z*) also pass from the bank to the two lateral bamboos, which prevents them from yielding to the stream; while a small bambo (1 2) from one of the lateral ones stretches out the lower edge of the net. Two men are employed at this net; one below, who is generally the proprietor, and who takes out the fish; the other walks backward and forward on the inclined bamboos; and is usually hired, getting six-sixteenths of the fish. These are generally small, and most are caught from about the middle of September until the middle of November, when the rivers are falling.

Another kind of net, somewhat of a similar nature would appear to be better fitted for such a large machine. It is called Chak or Jhati, and is of a square form, a good deal bagged in the centre; see *Plate* 7, No. 2. Its angles are fastened to the ends of two bamboo bows that cross each other at right angles in the centre, which is suspended from the end of a bamboo lever, the other end of which rests against the bank, where the fisher sits. He lowers and raises his net by means of a rope, that is fastened to the far end of the lever. A large net of this kind, raised and lowered by a man on an inclined plain with the assistance of a pulley, might be a good contrivance in muddy water. The Chak is used chiefly by poor farmers and labourers.

The casting net is very much used. One from 9 to 11

cubits in diameter, and called Bhomori, and Khyepla and Khyeyuyal is commonly thrown from the shoulder, either from the shore or from a boat. The mesh is small, and the sinkers are often merely earthen rings baked by the potters, but iron rings are also used for the purpose. If made of cotton, the net will last seven years; if made of Son, it will last only four, and will cost from 8 to 10 rs. If the net is thrown from a boat, two men are required to this fishery; one to throw the net, and another to manage the boat. This latter and the boat are usually hired by the man who fishes with the net, and who allows the boatman six-sixteenths of the fish that are caught. The boat is only 13 or 14 cubits long and 2½ broad, and costs on the Mohanonda about 14 rs. Small fish, especially of the crustaceous kind, are chiefly caught in this manner, which is only used in the dry season.

A much larger kind, 38 cubits in diameter, and called Othar, is frequently employed, and is thrown by means of a long narrow boat, which must be rather longer than the diameter of the net. This is gathered carefully into the boat, one edge being taken in first, and then one fold is placed above another. The boat is rowed into the stream, and by a rower at each end is placed broadside on. Two other men then throw over first one edge of the net, and, as the boat drives, they throw gradually the remainder. The whole sinks to the bottom, and the boat is allowed to drive, until the edges of the net have been dragged close to each other, when the net is drawn to the shore. Very large fish are caught in this manner. The natives use the sein, of several sizes, and different names.

The Pahiljal of Ghoraghat is a sein composed of several pieces, about 11 cubits wide by 12 cubits long, which belong to different fishermen, six or seven of whom unite their stocks, and join their different pieces into one net. The centre pieces are the widest, the mesh is small, the floats are gourds, and the weights are rings of potters' ware. It is thrown out in the usual manner from the stern of a boat, and requires six or eight men to draw it. The fish are divided equally, the owner of the boat taking half share more than the others.

At Potnitola on the Atreyi the larger sein is called Bed, and is made in one piece 60 fathoms long, and 10 or 11

cubits wide in the centre. It is floated by the spongy stems of the sola (Aschynomene diffusa W.), and sunk partly by iron rings, and partly by those made of baked clay. The twine made of son would cost 10 rs.; but the plant is usually reared by the men, and spun by the women in intervals of labour, so that no estimate can be formed of its value. The boat is made of Mangowood, costs about three rs., but lasts only two years. Six men are required; the proprietor of the net and boat takes six-sixteenths of the fish, the remainder is divided equally among the other five men; so that a capital of less than 16 rs. is reckoned adequate to the labour of two men for the rainy season, at which time only this net is used in the river. At all seasons it is used in tanks. The largest fish are caught by it, such as Rohit, Katol, Chitol.

The Tana is a smaller sein of fine twine, about 90 cubits long and three cubits wide. It is floated by cuttings of a spongy reed called Ulu Khagra, and sunk by rings of potters' ware. One man goes with the boat, and another holds the end that is left on shore. I should have supposed that the man in the boat had most trouble, but his situation is considered as preferable. This net seems well fitted for clear water, a shallow river, and sandy bottom. Two or three nets of this kind are sometimes joined into one. The Tune is a small drag net, that is well fitted for fishing in shallow water among weeds. It is about 20 cubits long and five and a half cubits wide, and has neither floats nor sinkers. A row of sticks, about two feet long and two feet from each other, unite the two side-ropes, so that the net bags behind. A man at each end goes into the water, until both are about three feet deep; they then immerse the net, and drag it towards the shore with one end of the sticks touching the ground.

In the Mohanonda, which is frequented in the rainy season by the fish called Ilish, four other kinds of nets are used. They are called Khurki, Sanggula, Konayu, and Ber; but as I was there at another season I had no opportunity of seeing them, and cannot describe them from the accounts of the natives. This fishery lasts from about the middle of June until the middle of October, and two very fine kinds of Cyprinus, the Rohit and Katol, are frequently caught in the same nets. Wherever the fishery is of such importance as

to employ regular fishermen, the landlord exacts a revenue, which seems judicious and proper; because the proprietors are interested to improve the fishery, and to take care of the people employed; for I am persuaded, that a common property is in general neglected, and turns out of little or no advantage either to the public or to individuals. In this district the property in the fisheries (Jolkor) has in many places been separated from that of the adjacent land, which seems to me to be a great loss, as it is the proprietor of the neighbouring land alone that can take care either of the fish or fishermen. Yet probably some specious reason was held out for the separation, which I am told was made, when the Raja's estates were sold for arrears of revenue, and the sales were of course conducted by the collector. I heard, however, no reason assigned for such a separation, and must confess that I know of nothing rational which can be alleged in its defence. Even the fish in ponds do not always belong to the proprietor of the banks, who of course will never take care to stock them, and who is the only person that can prevent poaching, so that probably not one-fourth of the fish is produced for use that might be by proper care. The same may be said of Bils or water courses.

The duties that are levied on the fishermen are in general moderate enough, and do not amount to a considerable sum. The largest proprietor of whom I heard (Bolorum yoti) receives only 2000 rs. a year, and I believe that part of this arises from some duties which he levies on ferries. The proprietors generally let their fisheries from year to year, and the farmers (Izaradars) sometimes employ fishermen to catch the fish, either for wages or for a share; and sometimes levy so much money for each man or boat employed. Thus a water course (Bil) in the Maldeh district pays to the proprietor 130 rs. a year. The farmer employs 14 men to fish with the Byana, and these give him one-half of the fish. They fish for nine months in the year, and each can make about four rs. a month, out of which, however, they have to deduct all expences; but these are inconsiderable, as they require no boat, and make the whole apparatus. The farmer therefore receives about 500 rs., out of which is only to be deducted the rent, and the charge of watching to prevent imposition.

Small traders come and purchase the fish, which they retail at different markets.

These fishermen, when they fish with the trap (Onta), pay two rs. a head for the season of three months. Their profit is then still greater; but they have a remarkably good market in the manufacturing towns. Those who fish on the Mohanonda pay 12 anas a head yearly for the dry season; and the same sum, with four rs. for each boat that is wrought by five men, if they are employed in the Ilish fishery. In this case the more wealthy men furnish the boats and nets, and take one-half of the fish, while each man pays his share of the duty. The profits of those who fish with nets and boats is more considerable than of those who use the skreen and the traps. Near Maldeh the traders, who retail fish, have some capital; in other parts they are in general very poor, and the fish are often retailed by the wives of those who catch them. The rent in most parts is lower, and the fishermen poorer than near Maldeh. At Ghoraghat, for instance, on a noble river each fisherman pays five anas a year, and fishes in whatever manner he pleases. His monthly gains are reckoned from two or three rupees. On the Atreyi, at Potnitola, each fisherman pays six anas a year; but then, except from the chiefmen, 10 anas more are said to be exacted as presents, making the whole duty one rupee a head, and they may fish in whatever manner they please. At Potiram each fishermen pays one and a half rs. a year. Fishermen in general are not so poor as the common labourers, who are employed in agriculture, and many of them live like farmers, who have two ploughs. The whole number in the district may be about 2500 houses. The kinds of fish taken are very various, and mostly very small. There is nothing like an extensive fishery of any one kind, except that of the Ilish in the Mahanonda, which I have just now mentioned. On all other occasions among 100 fish taken there will be 20 different species.*

Crabs frequent the fresh waters of Bengal, and are distin-

* Dr. Buchanan gives a long and minute description of the fish; but his work on the fishes of the Ganges has been published some time ago. —Ed.

guished from the oblong kinds of crustaceous fishes by the generic name Kangkora. They are reckoned much inferior to the long-shaped fishes of this kind, and are indeed considered as impure by the higher ranks, who eagerly devour the others. In this district there are many crabs; but few of them grow to a size that would fit them for a European table. They are chiefly found in the parts near the Nagor Tanggon and Punabhoba, that in the rainy season are entirely inundated. When the inundation retires, these parts may be observed covered with little heaps of earth, about a foot high and eight inches in diameter, and in the top of each is a perforation. Under these are the lurking places of the crabs, which retire there for the dry season, and live in pairs. According to the report of the natives, these animals as the water subsides, dig perpendicular shafts, about three inches in diameter and seven or eight cubits deep; and, when at that depth, they form a chamber about a foot in diameter, which contains water until the next inundation, and in which a male and a female crab take up their residence. I attempted to dig several; but, being too early in the season, the water always rose upon me before I reached the chamber.

Insects are not very troublesome in this district; at least from November until April, the season when I was there, I scarcely observed any mosquitos, although this is the season when they are most troublesome in Calcutta. I was told, however, that in the parts of the district which are inundated, these insects become almost intolerable in the rainy season.

The only wild insect which produces any thing of value is the bee, and it is the wax alone that is an object of commerce. Mr. Fernandez has rented the whole, except some portion of what is produced in Maldeh, and to each landholder he pays a certain sum, which must be very inconsiderable, as the whole wax which he procures, is said to be only 100 *mans*, probably 70 or 80 cwt. Mr. Fernandez employs people in different parts to collect the wax; and these who are called Sirdars, employ servants to cut the combs. At Nawabgunj, which is one of the most productive districts, and which gives 10 or 12 *mans*, each of 3,840 s. w. the people told me, that he allowed them 25 rs. for each *man* (about 82lb.) delivered at Dinajpoor, and they had all the honey; but this is of little

value. In other places however, it was said, that the Sirdars contract to give him a certain quantity of wax, and take the surplus and the honey for their trouble.

In this district there is only one kind of bee, which so strongly resembles the insect domesticated in Europe, that I should consider it as of the same species, were not its manners very different. The natives of India have no where tamed this industrious creature, and in Bengal, every kind of which the honey is collected, is usually called a honey-fly; nor could I discover that the people had any appropriate name for this species. It frequents the forests in the rainy season, and in some districts the people employed in collecting the wax suppose, that the bees do not then build, nor live in society; but that they take shelter from the rain under leaves, and that a great part of them perish from the severity of the weather. This is probably a mistake, and is believed only owing to these people having never frequented the woods to look for the bees; for I found, that at Nawabgunj a considerable part of the wax is procured in the woods about the end of September, and must have been formed in the rainy season. Besides at Ghoraghat, which is said to be the most productive district, and yields near 30 *mans* a year, most of the wax is gathered in the rainy season, and the people say, that the bees breed then, and live in society just as at other times. In the dry season the bees frequent the vicinity of villages, and form their nest on the branches of the neighbouring trees. Each nest consists of a single semicircular comb attached to the lower side of a horizontal branch by its diameter. One which I measured, and which was said to be of the usual size, extended about two feet in radius. On each face is a series of cells, and in some parts of the comb there are three rows, with passages conducting to those in the centre. The bees when at rest, cover the whole surface of the comb. Near the villages they begin to build in November, when the cruciform plants resembling mustard, that are cultivated for oil, begin to flower. In January when they have brought up a brood of young, they eat the honey and desert their nest, which is collected for wax. In the middle of December I examined a comb. The greater part of the cells were filled with young bees, a small portion was filled with honey; and a larger with a yellow powder, which the

natives, I believe, justly consider as the food for the young bees, and as the pollen of various plants. The bees begin to build again in March, when most of the trees come into blossom; and, having bred in June, they consume the honey, and retire into the woods. The combs formed at this season are most valuable, and contain most honey. In order to procure this the people chase away the bees, which is easily done by a little smoke occasioned by some burning husks of rice held under the comb, in a basket that is made of a green plantain leaf. I saw this practised with great success before a multitude, who imagined, that the wax-gatherer was possessed of a spell or prayer, which saved him from being stung. A comb, such as I have mentioned, is said usually to give about a pound of wax, when cleaned and melted; but those collected in spring are said to give 20lbs. of honey and wax.

They are several species of shells, chiefly snails (Helices), that are burned into lime sufficient to supply the usual demand of the country, which is confined to the chewing with betle, to the white-washing of a few religious buildings, and to a small quantity used in manufactures. When any large building is to be constructed by a European, stone-lime is generally brought from Silhet; but the natives prefer that made from shells. They of course must make advances long before the lime is wanted, to enable some poor people to collect shells in the dry season. Most are procured from marshes and old courses of rivers, where the water is stagnant.

Plants.—A country so much cultivated as this district, is not favourable for the pursuits of a botanist; neither was my journey through it performed at a favourable season. I have not much therefore to offer on this subject, especially as I found a great difficulty in procuring any satisfactory intelligence from the natives, who apply names so indefinitely even to the most common plants, that in order to avoid numerous mistakes great precaution is required.

Among the natural productions of most countries, forests constitute a valuable and most distinguished part. In this district however, although not very extensive, the demand for their produce is so small, that forests may be considered as not only almost useless; but, from their harbouring destructive animals, they ought to be looked upon as injurious, and therefore should be eradicated as soon as possible. By some

unaccountable caprice, the property of the forest is often vested in a person different from the owner of the soil. This person, although he has no legal right to prevent the owner of the soil from cultivating it, will of course take all indirect means of securing or enlarging his property, and none is so effectual as the encouraging the breed of destructive animals. In one division I accordingly heard it alleged, that the keepers of buffalos turn loose all the young males, and allow them to become wild.

The wastes (Jonggol or Byana) of this district, may be divided into two kinds; one containing trees, called here Kathal; the other contains reeds of various kinds, and is denominated from the species which is most predominant, with the term Byana annexed. The English call this kind of waste or forest by the appellation of grass-jungle. The proprietor, as I have said before, receives a very inconsiderable profit from both kinds. Those who want timber for building, or for the implements of agriculture, must pay a trifle for permission to cut a tree; and where there is a demand for the produce of the forest, a Bonkor is appointed, who levies a small duty on those who cut fire-wood, thatch, reeds, bamboos, or the tree of which Catechu is made. Other persons (Pholkor) rent the wild fruits, which are used as acids in cookery, for medicine, or for dying and tanning. Finally, other persons rent the duties (Kahachorayi), that are levied on the buffalos, which pasture in forests.

The only people who can be called wood-cutters, in this district, are those employed for supplying manufacturers, and especially the Company's factories with fuel. At Maldeh the firewood is cut by farmers, who live near the woods of Peruya, at times when they would otherwise be idle. Fifteen times a month a man cuts as much wood as when green loads four oxen, and brings it for sale. For the 60 loads he receives four rs., and pays a small monthly duty for each ox. The load does not exceed one *man* of 100 s. w. the ser, or is about $103\frac{5}{4}$ lb. avoirdupois. At Ghoraghat each wood-cutter pays 12 anas a year. The timber which the woods contain is little fit for building boats, and the poverty of the natives prevents them in general from using timber in their houses, or even for fuel; so that almost the only demand for the wood, in this district, is confined to the making of a few

small implements of agriculture, a little coarse furniture, a few beams and posts for the houses of the more wealthy inhabitants, and to the supply of a little firewood for some of the Company's factories, Mauldah, Nichinta, and Shilboris. (Maldeh, Nichintapur and Selvorish R.). All the former of these purposes might be much better supplied from trees planted round villages; and the last would require only three small woods, provided these were properly managed, and regularly cut. A wood of a thousand acres would be fully adequate to supply the demand of any factory, if properly managed, and no encroachments were allowed. At present I have supposed that about 220 square miles are under forests, woods, or bushes.

Before this country was cultivated, I imagine that the lower parts were rendered almost impenetrable by thickets of reeds, while the high parts were covered with a forest consisting almost entirely of a tree, which is called here Sal or Gojal, and is well known by the former name to the carpenters of Calcutta. It has lately been described by botanists under the name of *Shorea robusta.* In this district there remain several small forests of this tree, which indeed seems to spring up almost spontaneously, wherever a dry soil has been left unoccupied; for the fruit having wings is carried far by the winds. In this district, however, the tree is not procurable of a size fit for sending to a distant market, and is chiefly of use for making ploughs, and small posts and beams for the better kind of the natives' houses; and as it is a handsome tree with very odorous flowers, it might be planted to great advantage round the villages in the stiff clay soil, where it thrives. It is said, that in Morong a resin called Dhuna is extracted by incision from this tree, but this is not practised in Dinajpoor.

In this district, however, by far the greater part of the forests owe their origin to deserted towns or villages. The trees which grew round these have gradually increased, and have given shelter to some others that are not usually found in such situations. I shall therefore give a list, both of the trees that usually grow round villages in this district, and that have found shelter among these in the woods which have sprung up on ruins. I shall add the botanical names, so far

as I know; but the list is far from exhausting the subject. In this place I shall also take an opportunity of mentioning the management of plantations; although, strictly speaking, that might be considered as a part of agriculture.

The bamboo is the most common and useful woody plant in this district. The houses, furniture, boats, and implements of agriculture are entirely or in part made from this valuable reed, and it is the common fuel; so that it supplies all the purposes to which wood is applied in Europe, and is no doubt one of the principal articles of produce in the country; for the annual value of the bamboos that are cut cannot be estimated at less than 5,00,000 rupees. It grows from a creeping root, which extends from 12 to 20 feet in diameter, and sends up 40 or 50 stems. These form a clump, that keeps separate from the others which are adjacent. Every year from five to 10 bamboos of a clump are ripe and are cut; while young ones shoot up from the roots to supply their places. If the whole is cut at once, the plant is apt to die, and the stem perishes whenever it produces fruit, which very rarely happens in cultivated parts of the country. On this account indeed many of the natives believe that the plant never produces either flower or fruit. When a new plantation is to be formed, a portion of the common root extending two or three feet in diameter, together with five or six stems, is separated from a clump. The tops having been cut away, this is planted in the situation where it is intended to rear a clump, and this begins to produce ripe bamboos in about seven years. The plant requires to be exempted from inundation, and thrives best in a free soil. In this district bamboos, according to their size, sell at from one to three rs. a hundred: except at Dinajpoor and Maldeh, where they are about 50 per cent. dearer. Ground under bamboos, therefore, in general gives a considerable return, and pays a high rent. In this district the people have several specific names, which, so far as I could judge, they apply with little or no accuracy. I could clearly, however, distinguish four species, but there may be more; and I apply to these the names that seemed to me the best ascertained.

1. The most valuable kind seems to be called indiscriminately Boro Bangs, and Jauta Bangs. It grows to the

largest size, and is used for posts, rafters, beams, scaffolding, and whatever requires large dimensions, and it is the one most usually cultivated.

2. The next species is also much cultivated, being that used for making all sorts of basket work and mats. It seems to be indiscrimately called Makla and Jaoya.

3. The Korongji is a small bamboo that is not much cultivated. It is strong, but is chiefly used for making some small implements of agriculture or fences. It is often found wild.

4. The Beru bangs, or thorny bamboo, is only cultivated about the monuments of saints as an ornament, for it grows very straight, and its branches are beautifully feathered; so that it has a very different aspect from the others. It is often found wild, especially in the woods near Maldeh and Ghoraghat. Its chief use is for making dry fences, or for the shafts of javelins or spears, for which it is remarkably well adapted; but it is also employed in the roofing of huts. No account of any of these kinds has yet been published in the writings of any botanist to which I have access. This genus has indeed been much neglected, and its study is attended with numerous difficulties, even to those who are on the spot where they grow. The same may be said of the useful plants which I shall next mention, the Ratans or Canes, concerning which modern botanists may be said to have published nothing that is useful in ascertaining the different sorts. In this district there are two kinds, which grow spontaneously both in woods and near villages where the soil is moist and very rich, two circumstances that appear necessary for every kind of this plant. Both are of a very bad quality.

5. The one is called simply Bet, and its leaves resemble those of a cocoa nut (foliolis æquidistantibus bifariis). So far as I know, all the species that have leaves of this structure are proper Ratans, and have slender stems fit for switches, or for being split to form baskets or wicker work.

6. The other, called Gorol bet, has leaves like those of a date tree (foliolis subfasciculatis squamosis). All the species that I know, having such leaves, should be called canes, as they have thick stems fit for forming walking sticks, and are not used for the purposes to which the other are applied.

The stems of these are often of an immense length, so as sometimes to be twisted into cables.

7. Nearly allied to these is the Guya or Guvak of the Bengalese, the *Areca* of botanists. The plant seems to thrive in this district, but it may be considered merely as ornamental, for it seldom, if ever, brings its fruit to maturity; so that great quantities are imported. The reason of this seems to be, that it is not planted in groves which are sheltered by trees and hedges, and watered so as to preserve a constant moisture, which seems necessary for this palm. In the same latitude towards the east, where parching winds do not prevail in the spring, the tree thrives remarkably; and the same is the case in Mysore, where pains are taken to preserve moisture. This, therefore, seems an article the culture of which may be readily introduced, and may annually save a large sum to this district. At present a few are planted among other trees near some rich mens' houses, merely as an ornament, for which they are happily selected.

8. The coconut palm, Narikel of the Bengalese, is nearly in the same state. I imagine, indeed, that it could with great difficulty be made to ripen its fruit.

9. The elegant palm called *Caryota* by botanists, and Ramguvak or Bonkhejur by the Bengalese, is found growing spontaneously, but rarely, in the woods of this district; neither does it seem to thrive. It is applied to no use. In Malabar its stem produces a kind of sago, and its flowering shoot (spadix) yields a saccharine juice.

10. The Khorjur or Khejur of the Bengalese has been considered as the *Elate* of Linnæus, and is no doubt the Katou indel of Rheede, which Linnæus quotes as being the same with his Elate; but it is probable that this great botanist had some other plant in view, otherwise he would scarcely have separated it from the Date (Phœnix). This valuable palm is not common in Dinajpoor, but grows spontaneously, and thrives remarkably; and, could the inhabitants be induced to use its wine, might become a most valuable addition to their diet, as I have before mentioned, especially as it thrives on dry elevated places, such as at present are almost useless. Its juice may also be inspissated into a kind of saccharine matter.

11. The *Lontarus* of botanists, called usually Palmira by

Europeans, and Tal or Triniraj by the Bengalese, is a still more elegant and useful palm, now totally neglected by the people of this district, except as an ornament. Like the former it might become highly useful from its juice, and its stem is both a very durable material for building, and may be converted into small canoes, which in the rainy season serve to go from house to house. It thrives in this district, although it never grows spontaneously, and is finely adapted for covering the naked sides of tanks, which are now almost entirely useless.

12. The Badam of Bengal (*Terminalia Catapa L.*) is found in this district, and is a very ornamental tree. Its nut is, however, almost the only useful part; but, although remarkably light and well flavoured, it is so incased by a hard shell as to be of little value. It does not grow spontaneously, and seems to have been introduced by Europeans.

13. Nearly allied to the above, and having a nut equally good, is the Boyora, Bohora, or Bauri of Bengal, the *Myrobalanus Bellirina* of Gærtner. It is a fine tree, grows to a large size, and produces a timber, that the natives reckon valuable. The fruit is used both in medicine and by dyers, and both the bark and fruit are used by tanners. Unfortunately, when in flower, the tree emits a most abominable stench, which perhaps should prevent it from being cultivated, as the demand for its produce is very small.

14. The Horitoki of Bengal, or *Myrobalanus chebula* of Gœrtner, is not liable to the same objection; but its wood is not so strong, nor is its kernel esculent. Its myrobalan, or dried fruit, is however more used in the arts; and when the fruit is preserved green in syrup, it is a valuable laxative medicine, which is much employed by the natives. Men who have made a vow of chastity, and who are inclined to adhere to their resolution, endeavour to assist their virtue by eating this preserve, which is supposed to diminish the desires of the flesh. Were its growth encouraged near villages, in place of useless trees, the dried fruit might be procured in great quantities, and might become a valuable article in commerce, as I have no doubt, but that it might be employed in the finer kinds of tanning to great advantage. At present there is a sufficient supply for the demand of the district;

and those who collect the fruit, pay a trifle to the landholder.

15. The *Tomex japonica* of botanists is found in this district, and is a timber tree. It was shown to me as the Bijolghota, a plant used in medicine; but I have little confidence in the skill of the person by whom it was brought.

16. The Siyuli or Sephalika of the Bengalese, is a pretty small tree called *Nyctanthes arbor tristis* by botanists, from its flowers spreading at night and falling at sunrise. The flowers that have dropt are gathered, and produce a beautiful though perishable purple dye; the bark and leaves are used in medicine; and the inner bark affords a red dye, when beaten with a little lime, or with one-quarter of its weight of that of No. 103.

17. There is a species of *Gmelina*, of which no account published by modern botanists has yet reached me; but Dr. Roxburgh in his manuscripts calls it *Gmelina arborea*, and Rheede long ago described it under the name of Cumbulu. It is valuable on account of its wood, which although light is durable, is not readily attacked by insects, and is therefore peculiarly well fitted for making trunks, and is much employed by the natives in making their instruments of music. It is found in this district near Ghoraghat; but is rare, and is called Yoginichokro, while Gambhar, the name by which it is commonly known in the eastern parts of Bengal, is here applied to a very different tree, that will be hereafter mentioned, No. 92.

18. A species of *Cordia* called Dhovoli, of which I have seen no account in botanical books, is found in this district, where it grows to be a considerable tree.

19. The *Ehretia lævis* of Willdenow is a small tree found in this district. It was called to me Jonggoli Guvak or Guya, that is wild Areka, a plant to which it has in no part the most distant resemblance. I therefore suspect, that this name is not the real one.

20. Another *Ehretia*, which I have found in many parts of India, but of which no botanical writer has yet taken notice, was here called Bijol. It grows to be a very considerable timber tree, but is not very common. It was sent to Dr. Roxburgh, as a tree, which in Nepal produces a good fruit;

but, although the tree is very common in that country, some other must have been meant, as the fruit of this could not be eaten any where.

21. One of the most common ornamental trees in this district is the Gulongcho or *Flos convolutus* of Rumphius. It is often 20 or 30 feet high, and is very ornamental near the monuments of the Moslem saints.

22. The *Nerium Antidysentericum* of Linnæus, which ought to have been classed as an Echites, is very common in this district. It is not only a medicine, but its wood is made into small beads, which the Hindus wear round their necks. At Peruya it was called to me the Dudé, and a plant of that name is no doubt applied to make similar beads; but in other places, I know, that this Nerium is called Indroyov, while the Dudé is considered as distinct. In fact a very different plant was shown to me afterwards as the Dudé, as will be hereafter mentioned, No. 93.

23. The *Echites scholaris* of botanists is known to the natives of this district by the names Chhatin and Soptoporlo. It is very common, and sometimes grows to a great size. One, which I measured at Potiram, was 12 feet in circumference, at 5 feet from the ground. Its bark is used as a medicine for cattle. Its wood is considered as useless.

24. The *Bassia obovata*, if different from the latifolia, is found, but very rarely, in the woods of Dinajpoor, where it is called Mauha, and is applied to no use.

25. The *Mimusops Elengi*, L., called Bokul or Baul by the natives, is a common ornamental tree about villages. Its bark may be used as a tan, but the tree is of little value. The flowers are much valued by the natives, as they are convenient for forming chaplets. Their smell is too strong.

26. In the woods of Peruya considerable quantities of a fruit, called Khyrini, are collected for sale. They are produced by the *Achras dissecta*, W., a very handsome tree nearly allied to the former.

27. The *Diospyros cordifolia* W. was shown to me in the woods, and called Sundor; but, as other people gave the same appellation to a quite different tree, there is no proper authority for this name. The other was of the order of rubiaceous plants.

28. The Gab of the natives, and *Embryopteris glutenifera*

of botanists, is a beautiful tree common near the villages of Bengal. The fruit is eatable, but excessively sour. Its principal use is for paying the bottom of boats. It is beaten in a large mortar, and the juice expressed. This is boiled, mixed with powdered charcoal, and applied once a year to the outside of the planks. A good tree will give 4000 fruit worth 2 rs., and will be in full bearing in eight years, from the time when it was planted. The number in Dinajpoor is small, but sufficient for the demand. The wood is of little value. Gærtner, who first described this family of plants, has either made a great error in his description, and has mistaken the upper for the under end of the fruit; or else later botanists have been equally mistaken in considering the Gab as being a species of *Embryopteris*.

29. The *Vangueria edulis* is one of the most common small trees about the villages of Dinajpoor. It varies in sometimes having spines, and sometimes wanting them, and is called Moyna. Its fruit, which is about the size of an apple, possesses an intoxicating, or rather deleterious quality, when fresh plucked; but, after being kept a few days, may be eaten without danger, and is said to be sweet and agreeable.

30. The natives give the same name to a species of *Gardenia* or *Randia*, which shows the affinity of the two families of plants. In fact these two species have a strong resemblance. So far as I know, no account of this species has yet been published.

31. The Piralu of the natives is the *Gardenia Uliginosa* of botanists. It is a middling sized ugly tree, and its fruit is sometimes used in the curries of the poor.

32. The two following species of *Morinda* seem also hitherto to have escaped the notice of botanists. The one is called Daru Horidra, or yellow wood. It grows spontaneously in the woods, and its root is used as a dye.

33. The other, from its containing about four berries united in its fruit, is called Charichoka. The bark of its root, beaten up with a duck's egg and a little lime, is applied to the rude images made of potters' work, that are offered at the monuments of saints, or used by children as toys, and gives them a red colour.

34. The Kodombo or Kodom, called by botanists *Nauclea orientalis*, is a very ornamental tree, and is common in Dinaj-

poor. It is, however, inferior in size, and in the quality of its timber to the next species; but its beauty procures it a more common place near villages.

35. The *Nauclea parvifolia* is called here Kelikodombo or Talikodombo, and like several other species of this family is a good timber tree, but is very little used.

36. The *Crateva Tapia*, called by the natives Vorna, is a common tree, especially in the eastern parts of this district. It does not grow to a considerable size, and is of little use, except as an ornament.

37. The name Dengphol at Ghoraghat is applied to a tree, which cannot well be reduced to any family of plants established by botanists, but which comes nearest to the Harangana of Lamark, and has a great affinity to the Mangosteen. It is a very ornamental tree, and its fruit is about the size of an apple, but too acid. It is now growing in the Company's botanical garden, and it is to be hoped, that Dr. Roxburgh's description of it will be soon published.

38. The Jolpayi has usually been compared by Europeans to the olive, on which account it has been called the Eleocarpus; but the affinity is very slight, consisting merely in the fruit being somewhat of the same shape and size. The opinions of botanists concerning this tree are not very easily reconciled, which has probably arisen, from the *Perinkara* of Rheede and the *Ganitrus* of Rumphius having been considered as the same. The tree, of which I am now giving an account, and which is common in every part of Hindustan, is no doubt the Perinkara of Rheede; and is totally different from the Ganitrus of Rumphius and Gærtner. The fruit contains no oil, but is acid, and gives a good flavour to curries, which is its principal use. In some parts it is preserved in oil and salt, and then no doubt acquires a greater resemblance to the olive; but it is always a very inferior pickle. It is a very common tree in Dinajpoor, both in gardens and woods.

39. The tree, called Kopittho, or Kotbel, by the natives, has been classed by botanists with the *Limonias*, and called *acidissima*, for what reason I do not know. Rumphius, who is remarkable among botanists, for having named plants with sagacity and good taste, calls it *Anisifolium*, the leaves having a strong and agreeable flavour of the anise, and this name

ought to be preserved. The fruit is eaten by the natives, but is very poor. In Dinajpoor, the wood is not applied to any use. Retzius has been blamed for classing this plant with the *Cratevas*, and it certainly has not the smallest affinity with the plants which have been properly so called, such as No. 35; but then its affinity to the *Crateva Marmelos* of Linnæus, is striking, and they cannot be separated in any system that pretends to follow nature. The natives, indeed, have had more accurate notions than many botanists, and call the plant of which I am now writing, the Kot, or wild Bel, while the *Crateva Marmelos* is called simply Bel.

40. This Bel is a very common tree, and thrives even in the hardest clays. The natives place a great value on the fruit, but it is miserably insipid. The tree is not so ornamental as the Kotbel.

41. Another tree, very much allied to the last, is by the natives named Billwo and Sriphol, or the venerable fruit; for it is considered as an emblem of the spouse of Sib, and is a common offering to that god. The natives admire this fruit also; in fact, I have some doubt whether these two are not mere varieties of the same species. It is reckoned very sinful to cut this tree, except for the purpose of making a kind of carved stake, that is put in the ground on the consecration of a bull, a ceremony which will hereafter be mentioned.

42. The Nim, or *Melia Azadirachta*, is another sacred tree among the Hindus, and one of the most common in every part of their country. The tree has a considerable resemblance to the ash, and its leaves are intensely bitter, and much used in medicine, especially as a fomentation, and in assisting holy men to resist the allurements of beauty. Images are made of its wood, which is considered as pure; and as it is seldom eaten by insects, it might probably serve more useful purposes. In some parts of India, a medicinal oil is extracted from its seed.

43. Nearly allied to the former is a family of Bengal plants, of which no account has been given in the late botanical systems. One of this family is a common tree in Dinajpoor, especially near Ghoraghat, where it is called Pithras. In other parts an oil is extracted from the seeds of the two last mentioned trees; but its use is not known in this district. Allied to these also is the species of *Cedrella*, called by the natives

Tun, or Jiya. It is pretty common near Ghoraghat, and is a valuable tree, both as affording flowers which give a dye, and as yielding a wood that makes tolerable furniture; and in Calcutta it is much used for that purpose. None is, however, exported from this district.

45. The Konok changpa, called by botanists *Pterospermum ruberifolium*, is chiefly remarkable for its beauty, and certainly is one of the most elegant flowering trees that can be seen. The flowers are offered to the gods.

46. Nearly allied to the above is the *Salmoli*, or *Simul*, called also Mondar, or Madar, and while in flower, it is one of the most gaudy ornaments of the forest or village, for it is everywhere common. It is the *Bombax heptaphyllum* of botanists, at least the *Moulelavou* of Rheede, which is supposed to be of the same kind with an American plant described by Jacquin; but this seems highly improbable. There is no reason to suppose, that this is not a native of Hindustan, and I believe that there are very few plants indeed that were originally natives of both Indies. Linnæus seemed to consider all regions within the tropics as India, and that they all produced nearly the same plants; and on this subject he has been the great source of error. In fact, the cotton tree of the West Indies is much larger than our East India plant, and grows in a very different manner, with an immense tall stem, which sends out from its summit long horizontal arms. I have no doubt but that the trees are quite different, although having taken no notices concerning the West Indian kind, I cannot now point out the essential difference. I cannot account for Wildenow's stating, that the stem has no prickles, as in Rheede's figure, that circumstance is most accurately expressed. Our Indian plant is a valuable tree. Its wood is that commonly employed by the natives for making doors, and window shutters; for it lasts well in such situations, and is very strong to resist the attacks of robbers. The cotton is that commonly used for stuffing pillows. It is neither used for quilts nor mattresses, as it readily forms into lumps, and does not last. The fibre is much finer than that of common cotton, but is so straight that it cannot be spun.

47. One of the most favourite flowers with the natives, is the Changpa, or Chompok, called by botanists *Michelia*. The flowers are no doubt very odorous, but their smell is too

strong and overpowering. The tree is common; but it is useful only as an ornament, and as affording flowers that are offered to the gods.

48. The Chalitu of the Bengalese is no doubt the *Syalita* of Rheede, which is said to be the *Dillenia speciosa* of botanists; but the definition given of the *D. elliptica*, agrees better with our plant. Indeed, this family is as yet but indifferently described. It is a superb tree, although of little value, the fruit however is an agreeable acid in curries. The flowers are white, and very showy.

49. The *Anona squamosa*, called Ata by the natives, when cultivated with caré, is a tolerable fruit; but when it grows spontaneously about villages, it is exceedingly bad. It is called custard apple, by the English; but whether it is the same with the West Indian plant of that name I cannot say. It is however, probably an exotic in India, as I understand, that it has no name in the Sanskrita language.

50. The same is the case with the Lona or *Anona reticulata*, which in all situations is a most wretched fruit.

51. The *Uvaria longifolia*, from its growing tall and straight, has been called mast-tree by Europeans. The natives of Bengal call it Devdaru, a name that they also give to the pine, and to several other trees, which have not the smallest affinity to either. This is especially the case with the *Erythroxylon sideroxylloides* E. M. The Devdaru is in fact a celebrated tree, and together with the Sara Asod and Bot, to be hereafter-mentioned, is considered to be the usual residence of devils. The two latter are occupied by male devils (Brohmodaityo and Bhut), while female devils (Songkhini and Petine) occupy the two former. This kind of Devdaru being very ornamental, and fit for forming shady walks, has been much spread since Europeans began to pay attention to the ornament of the country. In other respects it is a very useless tree.

52. One of the most common small trees in the district is Panyala Paniamla or Phalsa, which by botanists is named *Flacourtia*, I must however say, that I am very doubtful concerning the species; and, although I doubt much whether there is more than one kind in this country, I have been inclined to refer it sometimes to one, and sometimes to another of the species that have been described. The fruit is like a

small bullace plum, and very poor; but is eaten by children. I have not observed here the kind that is common at Calcutta.

53. At Ghoraghat, the *Microcos paniculata* of botanists was brought to me as a tree called Bonchuniya, and said to produce wood better fitted for making furniture than any other found at that place, although it grows to only a small size. The wood-cutters there being remarkably stupid, I cannot place much reliance on what they said.

54. The Bixa, an American plant, is now rapidly spreading over Bengal, the inhabitants having found it a useful yellow dye, which they employ to give their clothes a temporary colour in the Dolyatra or festival of Krishno. With this also they colour the water, which, on the same occasion, they throw at each other with squirts. For these purposes it is well qualified, as the colour easily washes out, and the infusion has a pleasant smell. By them it is called Lotkan; and they say, that before it grew commonly in the country, the dry fruit was brought from Patna. Probably some other fruit was then brought, and its use has been superseded by that of the Bixa, to which the natives have given the old name; as there can be no doubt of its being an American plant, and its fruit could scarcely have been brought here from the west of India. In many parts it is called European turmeric.

55. There is little doubt, that America has also furnished us with the Goyava, which now is spread all over the country, and propagates itself without care. In the vulgar language it is called Peyara; but it has no name in the sacred tongue. When cultivated with care, I have sometimes known this fruit tolerable; but in general it is very bad. With the authors of the Encyclopédie, I am inclined to believe, that the *Psydium pyriferum* and *pomiferum* form only one species, and differ infinitely less than most kinds of the apple tree do.

56. The Jombu or Jam is a very common tree, both in woods and near villages. The Indians indeed are said to have given its name to their portion of the world, Jombudwip or the island of the Jombu tree. It would be difficult to assign any good reason for this, as the tree is neither very large or ornamental, and the fruit is execrable. By the natives, however, it is reckoned wholesome; and the timber is strong, although it does not polish. This I take to be *Calyptranthes Jambulana* of Willdenow, although most of what has been

written by botanists, concerning the *Myrti Eugeniæ* and *Calyptranthes* of India, would require revision. In fact every thing concerning most of these plants is obscure and incomplete, and the subject is extremely difficult.

57. From among these, Jussieu has with great propriety separated the *Eugenia acutangula* of Linnæus, which is a common tree in this district, where it is called Ijjol or Hijol. It is very ornamental, and its wood is much used; but is neither strong nor handsome.

58. The Nichom is a large tree called by botanists *Lagerstrœmia parviflora.* Its timber is reckoned good; but it seldom grows near villages.

59. The Babla or Gorsundor of Bengal has usually been referred to the *Mimosa farnesiana* of Linnæus, in which I suspect, there is a mistake; and I am rather inclined to suppose, that it is the *Mimosa indica* mentioned in the Encyclopédie Methodique, of which no proper account has yet been published, although it is one of the most common trees in India. It is rather rare in Dinajpoor, and is seldom applied to use, although it is valuable for many purposes. The wood is hard and strong, fit for the plough and the naves of wheels; the bark is an excellent tan; and the tree yields a gum equal to the arabic. The flowers are remarkably odorous.

60. The Guye Babla is another very common species of *Mimosa,* not yet properly introduced into botanical works, and it is to be regretted, that Dr. Roxburgh's accounts of these two trees should not yet have been published. In his manuscripts he calls this the *Mimosa sepea;* for it makes excellent hedges, and serves equally well all the purposes to which the other is applied. Its flowers are not so odorous, and the bark, when recently cut, emits a most intolerable stench.

61. The Khodir or Khoyer is the *Mimosa Catechu* of botanists, and the tree from whence the valuable drug called *Terra japonica* is prepared. The tree is common in the woods of Peruya, Jogodol and Ghoraghat; but it is only in the first, that any of the drug is prepared. The number of people employed in this manufacture is small, and the following account was given by the agent of one of the landholders; for I could not find any of the manufacturers. According to the agent there are 25 furnaces or fires, and each employs three

men. Trees are selected, that are at least two feet in circumference, and these are old; for in this district the tree does not grow to a large size. The bark and white wood are removed, and then the heart is cut into small pieces, and beaten into a kind of stringy substance by means of the instrument called Dhengki. Equal quantities of this and of water are put into earthen pots, each holding from 10 to 20 sers, and are boiled for about six hours. Each fire contains two or three pots. The decoction is then decanted into a pot, and is formed into two kinds of Catechu, Khoyer and Papri Khoyer, the first dark and the second light coloured. The first is made by simple allowing the extract to dry in the pot without addition, the latter is made by putting some ashes of cow-dung in the bottom of the cooler. The ashes are covered with a fold of muslin, over which the warm extract is poured. It is sold to the merchants in these pots, and by them is formed into balls, and dried in the sun. The merchant makes about 4 sers of 100 s. w. from each pot; and pays a rupee for 5 pots, which should make about 51⅓ lbs. avoirdupois. None can be made in the rainy season. Each furnace could make 50 pots in the month; but the workmen seldom exert themselves, and always are in debt to the merchant, who has great difficulty to induce them to work. Each furnace pays 4 anas a year to the landholder. The merchants sell the dried balls at 7 rupees for the *man* of the same weight, which is almost 103¾ lbs. avoirdupois.

As I was not satisfied with this account, I sent a native into the woods, who gave me the following account. A manufacturer, of whom there are five or six in Maldeh, hires four men and remains with them in the woods for seven months in a year. He pays 12 rs. a year to the landholder for the wood, and cuts as much as he can manufacture; 40 sers of chips give 5 sers of Catechu; and each month the manufacturer, with the assistance of four labourers can make 4 *mans*, or 160 sers of 100 s. w., or about 413 lbs. avoirdupois, which he sells immediately to the druggists for 28 rs. The whole produce of seven months is therefore 196 rs. From this deduct 12 rs. for rent; 84 rs. for workmen's wages, at 3 rs. each a month, on account of their living in the woods, and 4 rs. for the expense of sending the drug to market, and there

will remain 96 rs. for the manufacturer, who does not require at the utmost a capital of more than 30 rs.

It is very likely, that both methods of conducting this manufacture may be employed. The rent stated by the agent is perfectly absurd. The Maldeh Khoyer or Catechu is not reckoned of the best quality. The tree is rather scarce; and if it were wished to increase the manufacture, it would be necessary to destroy all the useless trees in some part of the forest, and to allow none to grow, except this kind of *Mimosa.* It is one of the nine sacred plants, of which small branches are burned to the planets, and the Hindus reckon nine of these bodies. This is sacred to the planet which presides over Tuesday (Monggol.)

62. The Chorki is a very common tree near Ghoraghat, and is a species of *Mimosa*, that has not yet found its way into the modern systems of botany; but did not escape the industry of Rumphius, who seems to have described it under the name of *Cortex saponarius.* It is reckoned a useful timber.

63. The *Mimosa Lebeck*, as described in the Encyclopédie Methodique, is a very common tree in most parts of India, and grows near several villages in this district, especially in low places. It was called to me Jonggolijot; but I suspect, that it was not accurately named, and that its proper name is Korai, which is also given to the following; for the two resemble each other so much, that in common language they might readily be included under the same name. Its timber is strong.

64. The *Mimosa marginata* E. M. is a tree that produces more valuable timber than the former, and is found in the woods of this district, where it is called Korai. Small boats are sometimes built of the Korai, which probably includes both kinds.

65. The Sangi or Somi, which Sir W. Jones makes a synonym of the Babla, is alleged by my people to be different, and they show me the *Prosopis aculeata.* It is one of the nine sacred plants, and is offered to *Sani*, the planet which presides over *Saturday.* It is common in Dinajpoor, but is applied to no use.

66. The Tamarind tree, by the natives called Tetul and Tintiri, is a most valuable and elegant plant. Besides pro-

ducing a fruit, that is too well known to require being described, and which is much used by the natives as an acid in seasoning their food, its timber is excellent for many purposes, and makes handsome furniture. As it is hard and strong, it is commonly employed for making oil and sugar mills, and washermens' boards. The seeds are frequently employed by the Indian dyers, and by those who weave woollen cloths. A good tree will give about 350 lb. of fruit, worth from three to four rupees. The average value, however, may be two rs. a year, and is nearly of the same amount with that of a good Mango tree. The wild tamarinds of Peruya are the only fruit exported from the district, except a few mangoes from the same vicinity.

67. The *Cassia Fistula,* called Songdhalu and Sonalu by the natives, is one of the greatest ornaments of India. The leaves bruised and mixed with lime-juice are used as a cure for the ring-worm, and are applied to reduce tumours in cattle. The natives here seem to be ignorant of the purgative quality of its fruit. It sometimes grows to a very considerable size.

68. The *Moringa* of botanists is one of the most common trees about the villages of this district, where it is called Sojena and Sobhangjon. The flowers, unripe fruit, and leaves, are common ingredients in the dishes of the natives. The bark of the root is used by Europeans as a succedaneum for horse-radish, to which, however, it is very inferior. The seeds, which are said to be the Behen-nuts of the old shops, are applied to no use by the natives, who do not know that they contain oil.

69. The *Adenanthera pavonina,* called Roktochondon by the natives, is found about the villages of Dinajpoor. The native name signifies Red Sandal wood, and its wood is said to be odorous, and it may be used instead of sandal in the worship of all the gods except Vishnu. It is probable that the trees which grow near villages may have no scent, for that is often the case with the real sandal. There seems, however, to be several different trees in India that are called Red sandal, and my inquiries have not yet been sufficiently extended to enable me to treat the subject fully.

70. 71. The Lal Kangchon, a *Bauhinia* of which no men-

tion is made in botanical systems, and Swet Kangchon, or *Bauhinia candida*, are very common trees near the villages of Dinajpoor. They are small trees, for little use except ornament; but they produce most elegant flowers. The young pods are used as a vegetable in curries.

72. 73. The Vokpushpo of the Sanskrita is by the vulgar divided into two kinds, called, from the colour of the flowers, Lal Vok and Sadavok; and in this they have been imitated by modern botanists, contrary to all their professions of not regarding colour. Ever since the latter times of Linnæus, they have been also very unfortunate in the different families of plants into which they have thrust these elegant trees. Linnæus, in his first attempt to class these plants with the *Robineas*, seems to have approached much nearer perfection than afterwards, when he classed them with the *Aeschynomene*. Willdenow, who names them *Coronilla grandiflora* and *coccinea*, has been equally unfortunate. The tree is very common about villages, and its flowers are used as offerings to the gods. The calyx and pistillum are fried and eaten with rice. The unripe pods are also used as a vegetable in curries. The wood is of no use except for fuel.

74. The elegant tree, called *Erythrina indica* in the Encyclopédie Methodique, is called by the natives Palitamadar. In this district, although it possesses several advantages, the tree is not very common. Any cutting, however large, immediately takes root; so that it is an excellent material for hedges, especially as it is prickly. Its wood is both light and strong, so that the carpenters of Calcutta prefer it to all others for the poles of palanquins. Its leaves are used in medicine, and its flowers are very ornamental. It does not, however, grow to a large size.

75. A much more common and equally beautiful tree, and much resembling the former, is the Polas or *Butea frondosa*. The flowers of this are not only offered to the gods, but in the festivals of spring serve to give a temporary yellow dye to the clothes of their votaries; on which account it is called Vosonti. The tree is of little use, and cannot be propagated by cuttings; but it is very common in most forests. It is sacred to the planet of Monday.

76. The *Dalbergia arborea* W. is one of the most gene-

rally diffused trees in India, but is not very common in this district, where it is called Dorkorongjo or Dorkoromcha, and is applied to little or no use.

77. The plant consecrated to the memory of Sir William Jones, and called Ozok, is not uncommon in this district. It is of no use, except to afford elegant flowers that are offered to the Hindu gods.

78. The original *Anacardium* of the shops, a name properly restored by Jussieu to the *Semicarpus* of Linnæus, is the Bhela of the natives. The juice of its nut leaves an indelible stain on linen, and is used for marking it. The nuts are also used by tanners, especially in dressing the hide of the rhinoceros or buffalo to form targets. The timber is of little value. It is common in the woods.

79. The Mango (amro or am of the natives) is one of the most common trees, not only in the plantations of this country, but in the woods, where it has grown spontaneously from the seeds of those that have been planted about villages which have been deserted. The Mangos called Maldeh have a high reputation, and may be considered as one of the finest fruits in the world; but few of these grow at Maldeh, all the plantations of the most valuable kinds are on the opposite side of the Mohanonda in the Puroniya district. Still, however, the mangos of the left bank of the Mohanonda are preferable to any others in Dinajpoor.

As the produce of the mango tree, even in its present state, is one of the most valuable in this district, for it cannot be of less annual value, on an average, than 4,50,000 rs.; and as the management is better understood at Maldeh than any where else, I shall give some account of the manner in which this fine tree is cultivated by the people of that place. A bigah of ground, which there is rather more than one-third of a acre (0.3644), is considered as a decent plantation. I shall now detail what the cultivators state as their expenses and profit on such an orchard.

First Year's Expenses.—To making a mud wall round the whole, 2 rs.; to ploughing 10 or 12 times from the middle of September until the middle of November, 1 rupee; total, 3 rs. To 25 seedlings, 3 years old, raised with much earth, 6 rs. 4 anas; to planting in deep pits, 2 rs.; to watering and weeding one man for 8 months, 18 rs.; total, 29 rs. 4 anas.

EXPENSE OF EACH OF THE 2nd, 3rd, 4th, AND 5th YEARS.—To 10 or 12 ploughings, 1 rupee; to reparing the wall, 1 rupee, 8 anas; total, 2 rs, 8 anas. Expense of the first year, 29 rs. 4 anas; expense for the 4 following years, 10 rs.; rent for 5 years at 14 anas, 4 rs. 6 anas; stock required, 43 rs. 10 anas.

In the 6th year, or when the trees are from 8 to 9 years old, they begin to yield saleable fruit, partly green, partly ripe, and their produce is reckoned to be doubled every year, for 5 years, in the following manner: —6th year, each tree 160 M. total 4,000, at 960 per R., 4 rs. 2 anas, 8 pice; 7th year, each tree 320, ditto 8,000, ditto, 8 rs. 5 anas, 4 pice; 8th year, each tree 640, ditto 16,000, ditto, 16 rs. 10 anas, 8 pice; 9th year, each tree 1,280, ditto 32,000, ditto, 33 rs. 5 anas, 4 pice; 10th year, each tree 2,560, ditto, 64,000, ditto, 66 rs. 10 anas, 8 pice.

The produce now becomes nearly stationary, for although the trees grow longer, and produce a greater number, the size and value of the fruit diminishes. The only expense, after the first five years, is to watch and collect the fruit, the rent, and a little ploughing or hoeing. The wall is allowed to go to ruin. In other places of this district the produce is of less value, and may be estimated at 2 rs. each tree; for a very large proportion of the mangos, when allowed to become ripe on the tree, contain an insect (*Curculio*) that renders them useless. They are therefore in general gathered when unripe. A plantation will last 50 or 60 years. It might be supposed that with such a large profit the plantations would be extending fast; but this does not appear to be the case. Most even of the old plantations are neglected, and do not contain one half of the trees which they might. Useless trees, especially wild figs, spring up, carelessness allows them to take root, and the prejudices of the landlords prevent them from being cut. Besides, there is no encouragement for plantations. If a tenant gives up his lease he is allowed nothing for the trees that he leaves behind, although he may have been at the whole expense of rearing them. The great uncertainty of the crop is no doubt also a strong objection to these plantations. In many years the mango almost entirely fails, and in others it is so exceedingly abundant that there is scarcely any sale for the produce. Heavy fogs or rains, when the flower has expanded, almost certainly prevent the fruit from forming. Besides, a capital of 40 or 50 rs. is rather uncommon.

The natives are entirely ignorant of the art of engrafting,

which is the only means by which good kinds can with certainty be reared; for the seed taken from one tree will produce 20 different kinds, not one of which perhaps may resemble the parent. The precautions which the natives take are no doubt entirely useless. They will not plant a mango seed, the fruit of which has been bitten by the teeth, or cut with iron. The people of India usually attribute the abundance of the insect to the soil, or to climate; but I am rather inclined to think that the quality of the fruit has much more effect, because I observe some trees that always escape in the worst districts; and I observe that the insect is peculiarly fond of the sour resinous kinds. I confess, however, that this opinion is still liable to great uncertainty; but, if well founded, it is a strong additional reason for the employment of engrafting. In most parts of this district the fruit is chiefly used green or unripe, for when allowed to ripen, as I have said, it becomes full of insects. Those near Maldeh are not so subject to this loss. In Dinajpoor green mangos come into season about the 12th of April, and continue until almost the end of May. During that season they enter largely into the dishes of the natives, and are preserved at Maldeh in sugar or honey. In other parts many are preserved in mustard-seed oil. Some are cut into four parts, and dried in the sun; but by far the greatest part is preserved by cutting the green pulp from the stone, and beating it with mustard-seed (sorisha), salt, and turmeric, to which are occasionally added some of the carminative seeds, such as Cummin. Those preparations keep throughout the year, and are a common seasoning for the food of the natives. The ripe mangoes continue common from the end of May until the middle of July. Their expressed juice is frequently inspissated by exposure to the sun; in this state it will keep throughout the year, and is eaten with milk.

The wood of the mango tree is much used, owing to its being plenty; for its quality is very inferior to that of many trees, which is little employed. Small boats built of it do not last above two years. Most of the package boxes are made of this wood. The inner bark contains a great quantity of a yellow colouring matter; but as yet no method has been devised for fixing it as a dye.

80. Nearly allied to the mango is a family of plants, which

Springel, a learned German, has done me the honour of calling by my name. A species of this was shown in the woods of this district as the La or Lodh, which is used both by dyers and tanners; the former use the bark, the latter the leaves. I am far, however, from being certain that the person who showed it was sufficiently skilled.

81. The Jiyol of the natives is one of the most common trees in India, and is chiefly valuable for its being easily propagated by cuttings, no matter however large; so that a hedge or avenue may be formed very quickly, as has been done near Madras. In the dry season the tree loses its leaves, and is never handsome. Its wood is of very little use, nor does it form a good fence, as it has no thorns. In this district, however, it is the hedge most commonly used. It produces a great quantity of gum; but the qualities of this have not yet been ascertained. In this district many houses have been built with large branches of this tree, that have been placed in the ground for posts, and these have taken root, have pushed forth branches, and now produce a very picturesque appearance. I do not find this tree described in modern systems; but in its botanical affinities it comes very near to the *Rhus vernix* W.; although there are such differences, that Dr. Roxburgh seems inclined to form it into a separate genus.

82. The *Spondias Amara* E. M. is a much more elegant tree of the resiniferous order. The French botanists are justly to be praised for having preserved its native name, which is far from being barbarous. In this district it is called Amra or Amratok. The fruit, both green and ripe, is an excellent seasoning in cookery, and is the only thing of use, that the tree affords.

83. The *Jujuba* of botanists is by the natives called Koli, Kul, Boyer, and Bodori usually pronounced Bodol; and is so common, that it communicates its name to several places, especially in the south-west of the district. It is there however, much more remarkable for quantity than quality; for I saw none that could be reckoned good, and in some parts it is a tolerable fruit. The natives pick out the stones, and dry the ripe pulp mixed with salt and tamarinds, which forms a seasoning for their rice. It is a small tree, and its timber is of little use.

84. A larger species of the same genus, the *Zizyphus xylocarpus*, is common in the woods, and its timber is reckoned of some use. Some people called it the Jonggoli Boyer, or wild Jujub, while others called it Pitalu; but this was also applied to a very different tree, (No. 92), so that I cannot adopt it with certainty.

85. The Kamrangga is a small tree very common near villages, and in the woods of this district, and is the *Averrhoa Carambola* of botanists. The fruit, which is very acid, is often made into tarts by Europeans, who sometimes imagine that it has a resemblance to the gooseberry. It is also used by the natives as an acid seasoning, but is not much valued.

86. Nearly allied to the above, and once joined with it in the same family by Linnæus, is the Horiphol called also Loboni, and Loyair. It is now called *Cicca* by botanists, and probably both *Disticha* and *Nudiflora* may be referred to the same plant; at least I am unable to determine, to which of the descriptions the plant of this district has the greatest resemblance. It is a handsome, though small tree, and grows pretty frequent near villages. The fruit is the only part used, and in its quailties very nearly resembles that of the last-mentioned tree.

87. Still nearly allied to these is the *Emblica* of botanists, who seem to have borrowed the native name Amloki. It has been placed in one of these convenient tribes (*Phyllanthus*), into which European botanists squeeze any thing, with the structure of which they are little acquainted, and from which they have carefully excluded the only plants (*Xylophylla*), that deserved the name. The fruit preserved in either sugar or honey is much used by the natives as a sweet-meat, and dried as a medicine. The natives have an idea that this fruit, and that of the *Chebula Myrobalans* have never been found ripe, except by some very holy persons; and it is supposed, that such as have been favoured with eating such a rarity, have been ever afterwards exempted from hunger. The wood is little used.

88. A fruit called Lotko is mentioned in the Ayeen Akbery as peculiar to this district; but it is found in all the eastern parts of Bengal, and is common in the kingdom of Ava. It has strong affinities to the three last-mentioned plants; and the pulp that surrounds its seeds is rather agreeable, and

might perhaps be improved by cultivation. It has not yet found its way into the systems of botany.

89. The plant, which I described in the account of the embassy to Ava by Colonel Symes, under the name of *Agyneia coccinea* must be removed to a newly formed tribe called *Bradleja*. It was shown to me in the woods of this district by the name of Boro Amla, and is a small tree of no value.

90. The *Clutia stipularis* L. was shown to me by the name of Bonkangthali; but I am uncertain concerning the accuracy of the information, as a very different tree (92), was called by the same name. This tree grows to a pretty considerable size, and has been very improperly classed with some African shrubs. Its fruit is a berry that contains much oil in its pulp, which is rather an uncommon circumstance. I have already seen seven or eight Indian plants of the same family. Its bark is used as a yellow dye.

91. Among the other plants of this family is that called Kukur bichha, of which I have seen no account in the writings of botanists. It is common near villages, and grows to be a small tree with very ornamental foliage.

92. One of the most common trees in the Dinajpoor district, both near villages and in woods, was called by so many different names, most of them applied also to other plants, that I am quite uncertain concerning its real appellation. It was called Bonkathali (a name given to No. 90), Bharul, Pitali and Pitalu (a name given to No. 84); but its most common appellation is Gambhar. Now this name, I know, is given to No. 17, both in Chittagong and at Goyalpara, where the wood is much esteemed, and the leaves of the two trees have such a strong resemblance, that inaccurate persons may be readily mistaken. The confusion renders me doubtful, whether or not the wood of this tree is really as useful as that of No. 17, which is undoubtedly the proper Gambhar. I find no account of this tree in the writings of modern botanists; but it is either of the *Canschi* of Rheede, or approaches near to that plant. I am in a great measure induced to believe this, from that valuable authors having placed it next to the *Cumbulu,* which is the tree No. 17, to which our plant has the strongest resemblance. According to the present plan it may be thrust among the *Crotons,* a collection of plants

which seems to have been made from any specimens of exotics, that could not be otherwise arranged.

93. To this convenient family may also belong a tree that was shown to me as the Dude, from the wood of which are made beads, that are much worn by Hindus; but in this there is some doubt (see No. 22). The tree has not yet found its way into modern systems of botany.

94. The Sindur derives its botanical name from the worthy Dr. Rottler of Madras, and its Bengalese name from the powder which covers its fruit, and resembles red lead. The use of this as a dye is not known to the natives of this district. The tree is very common, but does not grow to a large size.

95. The *Ficus Indica* was celebrated among ancient writers, and under the name of Banyan tree, came to be equally renowned among the modern English. Indeed no person who has visited India, could avoid being struck with admiration at its great size, the picturesque appearance of its trunk, the fineness of its foliage intermixed with thousands of golden-coloured berries, and above all by its singular manner of sending down roots from its branches, and of forming new stems. Every thing concerning the history of this tree is clear, except among botanists, and the editor of the Hortus Malabaricus seems to have led the way of error (Partis 3, pagina 74 in nota), in which he has been followed even by Linnæus. So far as can be judged, this great botanist received specimens from the West Indies of a tree which resembled the Indian fig in its remarkable manner of growth; and he seems to have considered, that the two Indies had nearly the same vegetable productions, he immediately concluded, that his specimens belonged to the Indian fig, and described them as such. He also had probably received specimens of the true Indian fig from Bengal, without any account of its manner of growth, and described these under the name of *Ficus Bengalensis*, and I have already made an excuse for the appellation; but I believe on the whole, that the safest plan for botanists to adopt on the occasion would be to expunge whatever has been said concerning the *Ficus Bengalensis* and *Indica* since the time of Rheede. The authors of the Encyclopédie, indeed, seem to have been aware of the Linnæan error; but even they are wrong in considering this tree as the Pipol, and the description which they

give of the Ficus Indica is too nearly applicable to the *Ficus Bengalensis* or Bot. The leaves of this tree have no dots on their upper surface, which is said to be the case with the *Ficus Indica;* but I suspect, that the leaves of the *Ficus racemosa* have been taken for those of the Indian fig by the botanists, who have given it that character.

The tree, probably from its beauty, for it is of little use, is in great esteem with the natives of Bengal, and is considered by them as the female of the Pipol. As they are supposed to represent a Brahman and his wife, it is reckoned a sin to cut or destroy either, but especially the male; and it is considered as very meritorious to plant a young male tree close to a female with some religious ceremonies, approaching to those of marriage, but not so intolerably prolix nor expensive. In this union the natives have discovered great taste; the elegant lightness and bright foliage of the Pipol being well fitted to contrast with the rigid grandeur of the Indian fig; although from these qualities it is difficult to account for their having appropriated the sexes of these trees, in the manner that has been done. The branches and leaves of these two trees being a favourite food of elephants, the keepers, who are low people and all Moslems, make sad havoc on the emblematical Brahmans; but this is submitted to with patience, provided they do not attempt the entire destruction of the plant. It is usual to place a piece of silver money under the Banyan tree, when it is planted; for it is supposed, that otherwise it neither will grow to a large size, nor send down fine roots. In Bengal this tree is called Nyagrodh and Bot. Besides its being an ornament, and affording a wholesome and cool shade, and being a good fodder for the elephant, this noble tree contains a milky juice, which coagulates into a kind of elastic gum, and makes admirable bird-lime. The milky juice is collected by making incisions in the branches, it is strained and mixed with one-fourth of its weight of mustard-seed oil. It is then fit for use. The juice of the tree next to be mentioned, possesses exactly the same qualities; their wood is of little value. In this district the young roots, which this tree sends forth from its branches, are often used for ropes. Notwithstanding some good qualities of these trees, the prejudice in their favour is attended with many bad effects. Their fruit being a favourite food of

monkies and birds, their seeds are constantly deposited on buildings, and on other more useful trees; and wherever they find a crevice, they take root. They then send long filaments to the ground, and no sooner procure nourishment from thence than they crush and overpower their original supporter, and thus lay waste all old buildings and plantations. This is not peculiar to these figs; most other Indian trees of this family possess the same noxious faculty; but these may be eradicated, whereas the two holy trees can only be removed, when it can be done without danger to their lives, that is when they may be transplanted, which is seldom the case.

96. The *Ficus religiosa* of the botanists is the Oswottho, Asod, or Pipol of the Bengalese. Although it wants the majestic size and numerous stems of the Banyan, it possesses great elegance. The various roots, that it has sent down from a tree or building, on which it first germinated, often form a trunk of the most picturesque form, while the beautiful shape of its leaves, and their tremulous motion, like those of the Aspen, give it a peculiar elegance. Its qualities have been detailed in the account of the Banyan tree. It is sacred to the planet of Thursday.

97. There are several trees, that have a great resemblance to the last mentioned fig, and although they want some of its elegance, are still very fine, and nearly of the same uses. They are reckoned, however, rather heating food for the elephant, although from this theory, their unfitness for the animal may be doubted. They are not considered holy, and a great many names are applied to them very indiscriminately, such as Porkoti or Pakur, Naksa, and Nakor. I think that in this district I have observed three very distinct species. The first I shall call Pakur. In the Encyclopédie it is considered as a variety only of the *Ficus religiosa;* but for this I see no sort of reason.

98. The next fig-tree of this district I shall call Nakor. It may perhaps be the *Ficus pyrifolia* of the Encyclopédie; but this is doubtful. It is readily known by its berries, which are about the size of a pea, and are covered by long white hair.

99. The next fig, which I shall call Naksa, differs from the former in having smooth berries. I cannot refer it to any species in the modern systems of botany; but it is the

Tojela of the Hortus Malabaricus (p. 3. table 63); from whence it would appear, that the Brahmans of the south give the same name to this tree, that those of the north give to the *Ficus religiosa.* The leaves of these two last are much smaller and narrower than those of No. 97.

100. Among the Indian figs, that are esculent for man there are two kinds in this district. They cannot be called fruit, in the common acceptation of the word, as they are only used as vegetables in cookery. The first is one of the most common plants in India. Dr. Roxburgh, in his plants of Coromandel, No. 124, calls it *oppositifolia,* which at once distinguishes it from every plant, to which it has any considerable affinity. I should have supposed, that this was the *Ficus symphytifolia* of the Encyclopédie, had not the learned and accurate authors omitted this circumstance. It is not improbable, however, that they may have seen only imperfect specimens; for the plants of this kind are very difficult to preserve. In this district it is called Dumor, Dumbor, and Khoska, and its fruit is very much used.

101. The *Ficus glomerata* of Dr. Roxburgh (Coromandel plants, No. 123), is the Yogdumor or Jogdumor, Yogingyo or Jogingyo Dumbor of the natives. Dr. Rottler, in a conversation which we lately had at Madras concerning the *Ficus indica* of Linnæus, seemed inclined to think, that this may have been the plant which that celebrated botanist meant; and it certainly comes nearer his definition than any common Indian fig that we know; but I have no doubt, that Linnæus had in view an American plant, which sends roots from its branches, and this is not the case with the Jogdumor. This tree is no doubt the *Ficus racemosa* of the Encyclopédie; nor do I know the reason, that has induced Dr. Roxburgh to consider it as different from the *Ficus racemosa* of Linnæus, unless it has been discovered, that the plant described by the celebrated Swede differs from the Atty Alu of Rheede, which no doubt is our plant. It is a very common tree near villages, and its trunk and larger branches produce bunches of large figs, which make very good curry. In Sanskrita it is called Orumbor, and it is sacred to the planet of Friday.

102. Nearly related to the figs are the bread fruits, of which the Jak is the finest, that we have in India. It is very

common in this district, wherever the soil is free; but does not thrive in a stiff clay. This tree is called *Artocarpus integrifolia* by botanists, is the Ponos, Kontoki Phol, and Kangtal of the higher and lower dialects of Bengal. It has a beautiful foliage, exhales a delightful odour in February, when in flower, produces a very useful fruit, is an excellent fodder for elephants, and produces a timber that is both useful and ornamental for the cabinet-maker. Unfortunately it warps much with heat, and therefore is not well fitted for this country; but would be useful where the climate is less severe. The wood is also used as a dye. The fruit has a nauseous smell, and its flavour is not agreeable to the generality of Europeans; but the natives are fond of the pulpy envelope, by which the seeds are surrounded, although they do not think it wholesome. The green fruit is very much used as a vegetable in curries, and the ripe seeds are preserved for the same purpose. In some parts of India, indeed, they form the common food of the people for two or three months in the year, just as chestnuts do in the south of Europe; and in fact, when roasted, they have a strong resemblance to that fruit. In Dinajpoor the Jak is rather neglected, and its produce does not sell so high as that of the mango.

103. The species of *Artocarpus* called in this district Dohu, Deuyo, and Borol, does not seem to be described by the systematic writers on botany, and is the least useful plant of its family. The fruit is small and sour, and is very seldom used, except by the poor. The wood is of little or no value. The inner bark, when beaten with that of the tree, No. 16, gives a red dye, that is used by some artists of this district, and is employed by tanners to give their skins a dirty orange colour.

104. The Sakot or Sara is one of the most common trees in this district, and indeed in most parts of India. By Dr. Kœnig it was considered as a species of *Trophis;* but has strong botanical affinities with the mulberry; and is no doubt the *Tinda Parua* of the Hortus Malabaricus, which Linnæus has called the *Morus indica;* but most of what has been written concerning the *Morus indica,* relates to a totally different plant, on which the silk-worm is fed. It is of very little use. The natives use a small branch of it in place of

a tooth brush, and suppose, that it not only cleans, but strengthens the teeth.

105. The Pangpiya of Bengal has had its name preserved in the *Papaya* of botanists. In every part of India it is a common tree near villages, but is of very little use. The natives like the ripe fruit, and reckon it wholesome.

106. The *Celtis orientalis* of botanists is a very common tree in this district, where it is called Jig. It has an ornamental foliage, but I know of no use to which it is applied.

107. The Khagorbhela is one of the most common trees in the district; but as I never saw its fructification, I know not its botanical history. By boiling its bark yields a gum or gluten, that is used by those who make artificial flowers.

108. Jibon. 109. Goneyari. 110. Parul. 111. Kengol. 112. Chamkul. 113. Jamrul. 114. Borophedus.

I had no opportunity of seeing these trees, and have nothing to say concerning them; but that they are found growing in the woods, or near the villages of this district. In the Appendix I have mentioned, that in this district, there are perhaps about 260 square miles, which are overflooded in the rainy season; and a great part of this extent is covered with long reeds commonly called grass-jungle by the English. Some part is no doubt bare sandy land, but as a small part of the land, that is not inundated, is overgrown with long reeds or harsh coarse grass, we may estimate the extent of this division of the wastes at 260 miles. Although several of these reeds are applied to use, this land, in its present state, may be considered to be of as little value as that which is overgrown with woods, and it is equally pernicious by harbouring destructive animals. If the whole were equally diffused through the district, use might be perhaps procured for a considerable part of its produce; but it is generally disposed in such large masses, that the neighbouring cultivated country cannot consume a hundredth part; and the produce is too bulky, in proportion to its value, to admit of being carried to a distance.

The natives, whom I consulted, seemed to have only confused notions concerning the different kinds of reeds, that are contained in these wastes; and sometimes they brought the same species under different names, while at other times two or three species were called by the same appellation.

What I have to say on this subject, therefore, gives me very little satisfaction; and I may farther state, that in this district less use than common is made of these plants, and their place is supplied by the bamboo, which indeed might probably serve everywhere much better, were it not somewhat more troublesome to work.

1. The Kus or *Poa cynosuroides*, is a sacred plant among the Hindus, and is dedicated to the invisible planet Ketu, which occasions the eclipses of the sun. It is very common in the wastes of this district, and mats made of it are exported to Calcutta, where they are used in religious ceremonies.

2. The Kese is another harsh grass, the leaves of which are used to form a coarse kind of rope. When exposed to the weather, in tying fences and hurdles, these ropes last about a year. The plant brought to me as the Kese was the *Saccharum spontaneum;* but I suspect, that a wrong plant was brought. It is also used as fuel.

3. The Ulukhoris one of the reeds most used by the natives of this district. I have not seen the flower, and therefore cannot say what its botanical name may be; but the plant called by this name at Goyalpara is the *Saccharum cylindricum.* Its leaves form an excellent thatch, and its stems are very frequently used in making the hurdles, which serve the natives for walls, both to their houses, and to surround the yard. These hurdles (Tati) are usually made of reeds laid parallel to each other, and confined between sticks or split bamboos, which are tied together, and cross each other at right angles. In a better sort of hurdles the reeds or bamboos are first split and wrought into mats, and these are formed into walls in the same manner. In this district no mats of this kind are made from reeds, unless we include the bamboo under that denomination. The Ulukhor is often used as fuel; and its stems, which are spongy, are employed to float nets. In some parts fields of it are preserved for thatch, and yield a good rent. These two last reeds are eaten by the buffalo; but they are extremely coarse.

4. The Nol or *Arundo Bengalensis* is a very large reed, not common in this district.

5. The Kagra is a reed, with which the natives usually write. From its various sizes, I should judge, that there are several different kinds; but I have not seen the flower. In

this district it is not common, and does not grow to a large size.

6. The Sor, from its white flowers, which I have seen at a distance, must be either an *Arundo* or *Saccharum*. It is little used.

7. The Sorongjo is the *Saccharum spontaneum*, a fine large reed, pretty common, but little used.

8. The Ikiri is one of the most common reeds of this district; but is chiefly used for fuel, by fishermen in making their traps, and by the cultivators of betel-leaf for sheltering the tender plant, which they rear.

9. The Byana seems to be the *Andropogon shoenanthus* of the Encyclopédie, at least the description applies tolerably well to our reed, which is very common, but is applied to little use.

10. The Gongdhayi is an *andropogon*, of which no account is to be found in the botanical systems. At Calcutta its root is used for making hurdles, which are placed at the doors and windows of chambers in the hot season, and are watered to produce coolness. The natives here know nothing of this art, but the stems are much used for making hurdles. In the parts of this district, where much sugar is boiled, fields of it are kept for fuel, although wood might be had in abundance, but wood is troublesome to cut. This plant seems to vary much from the soil in which it grows. When it is produced in a dry place, it is largest, and its root is odorous; the stem is then called Birna, and the root is called Khoskhos, but its leaves are very harsh. In moist places the elephant keepers call it Kotra, and the young shoots are an useful fodder for this noble animal.

11. The Sokorkondo is a most elegant *andropogon*, of which no description has been published in the Encyclopédie.

12. Nagormutha is a species of *scirpus*, with a triangular stem, of which the mats that the natives sleep on are usually made. I have not seen the flower.

These are the vegetable productions, which nature, with little or no assistance, has chiefly provided this district; but numerous bushes and herbs are scattered in the fields, ponds, marshes, and other waste places, and many of them are applied to use. Of these I shall now take notice.

The poorer class of inhabitants, as I have before mentioned, are unable to procure from gardens the vegetable seasoning, that would be requisite for their insipid diet. They have therefore recourse to the fields, to ponds, and thickets, from whence they obtain a scanty and coarse supply.

I. Plants of the kind called Torkari, which are insipid succulent fruits or roots, that are fried with oil in curries, or are boiled with salt and capsicum. 1. Dumbor, *Ficus*, see trees No. 100. 2 Yogingyo, or jogingyo Dumbor, see trees No. 101. 3. Piralu, see trees No. 31. 4. Jongoli alu, wild *Dioscoreas*, probably of several sorts. 5. Bangser Kongra, young shoots of the Bamboo. 6. Ram Baigon or Begun, *Solanum stramonifolium*, E. M.

II. Omboltas, or acids which are boiled with curries as a seasoning. 1. Jolpayi, *Elæocarpus serrata*, see trees No. 38. 2. Tetul, *Tamarindus indica*, see trees No. 66. 3. Chalita, *Dillenia speciosa*, see trees No. 48. 4. Amra, *Spondias Amara*, E. M. see trees No. 82. 5. Noyari Cicca, see trees No. 86. 6 Deuyo, *Artocarpus*, see trees No. 103. 7. Kamrangga, *Averrhoea Carambola*, see trees No. 85. 8. Boruyi or Kul, *Zizyphus Jujuba*, see trees No. 83. 9. Koromcha, *Carissa spinarum*.

III. Sak, or leaves, flowers and stems, that may be fried or boiled, to give a taste to rice. 1. Sojina, flowers of the *Hyperanthera Moringa*, see trees No. 68. 2. Kangta notiya, Kangta khoriya, *Amaranthus spinosus*. 3. Notiya. *Amaranthus oleraceus*. 4. Kochu, the petioli of some wild arums. 5. Helongcha, *Polymnia*, a species not published. *Jussieva repens*. 6. Jonaki, *Jussieva repens*. 7. Kalanunya, *Convolvulus repens* and *reptans*, which are of the same species 8. Susoni, *Marsilia quadrifolia*. 9. Hela nali; the root is called here Baromutha, but its proper name is said to be Saluk. It is eaten raw by children. The stem, which supports the flower, is dressed in curries as a Sak. The fruit in this district is called Bhengyit, but its proper name is said to be sovla. When unripe, it is dressed as a Torkari; when ripe, the seed is parched and eaten. The plant, I believe, is the *Nymphæa Lotus*. 10. Dima Gima, *Pharnaceum Mollugo*. 11. Putika, Soda Pungyi. (*Basella cordifolia*.) 12. Lal Pungyi, *Basella rubra*. 13. Sangchya. 14. Dron Dulobi, *Phlomis indica*, W. 15. Goyaliya, *Cissus quadrangularis*. 16. Dhengke Sak, an *Asplenium* of which I see no notice in books. 17 Seyal Bathuya, *Chenopodium album?* 18. Kalo Teporiya, *Solanum nigrum*. 19. Nune. 20. Amrul, *Oxalis corniculata vel pusilla*.

IV. Vegetables used without being cooked. 1. Ata, *Anona muricata*, see trees No. 49. 2. Lona, *Anona squamosa*, see trees No. 50. 3. Kalo jam, *Calyptranthes Jambulana*, see trees No. 56. 4. Singgur Paniphol, *Trappa*, fruit. 5. Kesur, *Cyperus tuberosus*, roots. 6. Podmo bij, *Nelumbium* seeds. The flower stem is also eaten raw. In China the plant is cultivated on account of these stems, which are a vegetable very commonly used in that country.

It was my earnest wish to have ascertained the officinal plants, or those used by the natives in medicine; but after

much pains I have been able to obtain no information concerning the subject, on which reliance could be placed. Being unable to procure a physician to give me information, at Dinajpoor I sent an intelligent man to the shop of a druggist to make out a list of such plants as he sold; for I found that this class of men has no book, which contains a list of officinals. The man, after several days labour, brought a list sufficiently long; but, on examination, it was found to want many of the most material articles. A collector of simples, usually employed by the druggist, was procured to bring the plants, but, after some days trial, I found that no trust could be placed on what he said. He repeatedly brought the same plant under different names, and applied the same name to various plants, which had not the smallest affinity. I have therefore been reluctantly compelled to wait, until I shall reside for some months near an intelligent physician or druggist, to whose knowledge of the plants I can trust.

A few other plants, that are in common use, remain to be mentioned.

1. The *Lawsonia inermis* or *spinosa*, Mehendi, are used by the Muhammedans of both sexes for colouring their hands and feet. The leaves beaten with a little Catechu are applied like a paste for a night, and the colour remains for about 15 days. These can scarcely be considered as different species.

2. The Panisiuli, or *Phyllanthus rhamnoides* W. is a very common shrub, which produces a black berry. The juice of this gives a dark purple colour, which is sometimes applied to turbans, but it does not last.

3. The *Mimosa saponaria*, or Amlokungchi, is common in the district, and its fruit is sometimes used in tanning; but the natives are not acquainted with the saponaceous quality, which occasions it to be in much request with more cleanly Indian tribes.

4. The Gaukungchi, or Changmolloti, is a small shrubby species of *Guilandina*, of which, so far as I can discover, no account has yet been published. Its pods are much used by the dyers of this district, and the people who collect them pay a revenue to the proprietors of woods.

5. The Sola is a plant much used both by fishermen, who employ it for floating their nets in place of cork, and by the makers of artificial flowers, who are numerous in Bengal.

Their work is indeed coarse, but the material is excellent, and seems to be the same with that of which the elegant artificial flowers of China are formed. In fact, nothing can more strongly resemble the structure of the petals of a flower than the pith of this plant, which I am persuaded would be a valuable acquisition to our artists in Europe. It might even be worth while to send some home as a trial. This plant grows in tanks and marshes. The trunk, which remains under water, is three or four feet in length, and three inches in diameter. It consists almost entirely of a fine grained, very light, white pith, which has a considerable coherence of parts, even when cut in very thin slices, and which can be dyed of the brightest colours. For making ornaments, the plant must be cut between the middle of October and that of November; what is procured after the marshes become dry, is fit only for floating nets. Some confusion seems to have taken place in the Hortus Malabaricus concerning this plant: the drawing (Part IV. tab. 18) seems to have been taken from the *Æschynomene Indica* of Willdenow, while the description, page 31, seems to refer to this plant, which is the *Æ. diffusa* W.

6. The *Valisneria spiralis* is the plant used by those who refine sugar, in the same manner as clay is used for this purpose in Europe and America. The plant grows very copiously in the rivers that have a gentle stream, especially in the Jomuna. By the natives it is called Pat.

MINERALS.—It is impossible to find a district less interesting to a mineralogist than Dinajpoor, as it consists entirely of soil, sand, and clay, and these in no great variety. The soil is seldom very deep. Under it is often a bed of clay; but sometimes even this is wanting, and the soil rests on sand.

The clay is of three kinds; First, a black, moist, smooth clay. Secondly, a red hard clay, which contains black angular concretions, that are sometimes indurated. This resembles entirely a porphyry in a state of decomposition. Thirdly, a yellow hard clay, which contains much ochre, sometimes in a sort of veins. It also frequently contains small rounded pebbles, and seems to be a rock in a state of decay. All these are fit for the potter, and all of them become red in the kiln.

The sands are of two kinds; First, large grained dark coloured sand, mixed with black mud. When water is found in this, it is always bad. Secondly, a fine light coloured sand,

of quartz and mica. In digging wells, the water is usually found in this, and is generally very good.

The wells in the stiff clay land are in general best, as that soil prevents the surface water from penetrating. In some places, such as between the Tanggon and Punabhoba, water has seldom been procured by digging; and when it has been found, the wells have been at least 60 feet deep. In other parts, such as Bongsihari, it is usually found at a depth of from 20 to 30 cubits; but, in most places, it is found at a still less depth.

It is said, that formerly, where Rajgunj now stands, the people used to dig out a clay called Khorimati, with which they whitewashed their houses. Such earths are common in many parts of India, and are schistose-mica, or granite, in a state of decay, the mica being the predominant and colouring matter. It is said that Mr. Hatch, formerly a magistrate, ordered the pit to be shut, which is not at all probable.

In some parts of the district Nitre was formerly made; but there seems to have been nothing peculiar in the soil, and it might be made equally well anywhere, with the earth taken from the floors of cow-houses, as was practised here. The Company has of late withdrawn the manufacture to more favourable situations.

CHAPTER VII.

AGRICULTURE. DIFFERENT PLANTS CULTIVATED, ETC.

It is said, that, when Mr. Hatch settled this district, it was estimated that three-fourths of the whole were fully occupied. If that report is true, and the estimate was well founded, this country has been declining, and according to my estimate 643,840 bigahs have since been deserted.*

Plants cultivated for their grain.—In almost every civilized country, plants cultivated for their grain are a principal object of the farmers care, and this is especially the case in Bengal, where these grains form almost the only sustenance of man. It is probable, that in this district about 6,400,000 bigahs are annually cultivated to produce grain. The grains which are cultivated in this district, are as follow:

I. Culmiferous Plants.—1. Rice, *Oriza sativa* W.; 2. Wheat, *Triticum sativum* W.; 3. Barley, *Hordeum vulgare* W.; 4. Mercuya, *Cynosurus Corocanus* L.; 5. Millet, Kayuni, *Panicum Italicum* L.

II. Leguminous Grains.—6. Thakuri Kolayi, I did not see the plant, and cannot say what it is. In some parts the *Phaséolus Max.* is called by this name; 7. Khesari, Teyuri, *Lathyrus sativus* W.; 8. Lentil, Mosur, *Ervum lens* L.; 9. Harimug, Kharimug, a *Phaseolus* of which no mention is made in Willdenow, nor in the Encyclopédie; 10. Oror, *Cytisus Cajan* W.; 11. Field Pea, Kalamotor, *Pisum arvense* W.; 12. Chona, Chhola, Lalbut, *Cicer arietinum flore purpureo*; 13. Kablibut, Sadabut, *Cicer arietinum flore albo.*

III. Oily Seeds.—14. Sorisha, a species of *Sinapis*, not mentioned by Willdenow, nor in the Encyclopédie; 15. Turi; 16. Rayi. Two species of *Sinapis*, that however approach very near to the *Brassica*. Neither is mentioned by Willdenow, nor in the Encyclopédie. The latter is commonly called mustard by the English, as its seed is hot and pungent; 17. Tora. This may be the *Raphanus sativus* V. of Willdenow, and no doubt belongs

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* In the Appendix, No. 1, I have supposed, that in the whole district there are fully occupied 3,585 square miles, that is 6,883,200 Calcutta bigahs. I have also supposed, that there are 649 square miles occasionally cultivated, of which perhaps a fourth part may be annually tilled, this increases the occupied land to 7,194,720 bigahs. Now the manner in which this is occupied, and the gross value of its produce as coming from the cultivator, may be somewhat nearly similar to the estimate contained in the statistical table, No. 4.

to that family. I see no reason however, for supposing, that it is a variety of the radish; 18. Kasthotil *Sesamum;* 19. Flax or Linseed, *Mosina, Linum usitatissimum* W.

Culmiferous Plants.—Rice is by far the principal crop in this district, and some portion of the land produces annually two crops of this grain; that however, does not increase the general produce very much, as the two crops do not yield much more than a single crop would. As the trouble is nearly double, it may be thought wonderful that this practice is generally diffused, but it is not done without very strong reasons. The seasons are so very uncertain, and the latter crop is so liable to fail, that it is of importance to seize the earliest opportunity of cultivating as much as possible for the first crop, so that should the latter fail, the effects of scarcity may be mitigated. But should the first crop succeed, why exhaust the soil by a second that will be superfluous? The reason here also is urgent. The first crop is reaped in the rainy season, so that its straw cannot be preserved, and as rice-straw is almost the only food, which the cattle have in this district, there is an absolute necessity for sowing the second crop for fodder. In inundated lands, such as near Churamon, the uncertainty of the crops, owing to the irregular swelling of the rivers has introduced another singular mode of having two crops from the same field. The ground is ploughed in the usual manner as for summer rice, and in spring the seed of the summer and winter kinds intermixed are sown in the same field, so that, if a season favourable for either happens, the people may not be altogether destitute of food. Although there is no difference in the management, the two kinds ripen one after the other at the appropriate seasons, which shows, that there is an essential difference in the kinds. The kinds of rice are very numerous, and the first division among them arises from the seasons in which they ripen.

1. One kind called Boro by the natives, ripens in the hot weather of spring, and is cultivated only in small quantities, chiefly in inundated lands, where there are marshes and old watercourses, that preserve a small quantity of water throughout the year. Sometimes a dam is made across the watercourse at the end of the rainy season, and its upper part forms a reservoir filled with water, which is let gradually out

to supply the rice, that has been planted in the lower part, which has been drained in order to admit of cultivation. In other parts small quantities of this rice are cultivated on the sides of old tanks, that are partly filled up, and the water is thrown upon the rice by a simple machine. In times of scarcity many poor people engage in this kind of cultivation, which gives them a temporary supply of food at the dearest season. In other years, less attention is bestowed on it, for the grain is very coarse, and the produce small, so that it would ill repay the labour. It is always transplanted, and its straw can seldom be saved. The grain is almost always consumed by those who have raised it.

2. Next follows the summer rice, called in this district Bhaduyi, and reckoned to be only of one kind. The grain is used almost entirely by the labourers on the farm, and is seldom sold. It is said, that it will not keep for more than a year. It is reckoned very heavy and indigestible for those who are not hardened by labour. Very considerable quantities however are raised, as where two crops of rice are taken in the year, or when a crop of rice is to be followed by wheat, barley, oil seeds or most kinds of pulse, this is the only kind that can be cultivated. In some places the pulse called Thakuri is sown along with this rice, and ripens a month after it is cut. This does not prevent the field from giving a winter crop of anything except rice. It is generally sown broadcast, and unless it is to be followed by a winter crop of rice, does not require that the field in which it is sown should be reduced to an absolute level. In a few places however, it is transplanted, and is then a month later of coming to maturity, so that it cannot be followed by another crop of rice; but this does not prevent it from being followed by any other crop, and the quality of the grain is rather superior to that which has been sown broadcast. Its straw cannot be preserved, as I have before mentioned. The grain may be used in all the same ways, that the coarse winter rices are.

3. The winter rices in this province are called Henguti, which is said to be a corruption of Haimontik. This implies rice that is cut in the season of dew, which is copious in the cold season. The words seem however, to be radically different. The kinds are very various, nor can I pretend to give a full

enumeration of them; but I shall reduce them to classes, and mention the principal kinds belonging to each.

1st. The coarsest kinds are those which grow in very low land, that is deeply inundated. These are sown broadcast in spring, and require a long time to come to maturity. Sometimes they are sown intermixed with summer rice, as I have before-mentioned; but this practice is confined to a small extent of ground in the vicinity of the Nagor river. These kinds are little better than summer rice, and their usual market value, when clean, may be 12 anas the *man* at 96 s. w. the ser, which is at the rate of 64 Calcutta sers or about 131 lbs. for the rupee. These coarse rices do not keep well, and are generally consumed in the course of the year by the labourers on the farm. If kept longer than two years, they do not absolutely spoil, but acquire a bad flavour. Except the tops none of the straw is preserved for cattle. These rices are the common food of the poor; form better cakes (Pitiya) than the finer sorts, and may be also prepared into Chira and Muri, which will afterwards be described; but a large proportion is used simply boiled. The most common kinds are—

1. Pokra; 2. Pakor; 3. Keledongga; 4. Kalanunya; 5. Dholanunya; 6. Bagunbichi.

Much less of the land fit for producing these is waste, than of any other kind of land in the district, and that portion of it, which has a free soil, is high rented. We may therefore safely conclude, that this is the kind of cultivation from which the farmer has the greatest profit.

2. Somewhat finer is a numerous tribe of rices, which are transplanted into land rather higher than the former, and are not preceded by a summer crop of rice; but in a free soil they are generally followed by a crop of pulse, which is sown among the growing corn, and flowers soon after it has been cut; but, when the rice is cut early the field is ploughed afterwards, and sown with the pulse. This kind of cultivation is also very advantageous, and the land fit for it is eagerly sought after by the farmers. The straw is not very good for cattle; but is used. As it is very rank, about a foot only near the top is cut with the grain, and the stems are afterwards cut for fuel or thatch. The rice like all the transplanted kinds keeps well, even when cleaned. It is

reckoned better and lighter after the first year, and continues in perfection for three years. It then gradually becomes worse, and in ten years it is almost useless. These kinds of rice are prepared in the same manner as the former; but do not yield meal so fit for making cakes, and are the kinds that are usually exported from Calcutta under the denomination of cargo rice. In this district the usual price is 14 anas for the heavy *man*, which is at the rate of nearly 55 Calcutta sers or 112 lbs. for the rupee. The most common kind are—

1. Kangdisayu; 2. Panisali; 3. Dudkolma; 4. Buthuya; 5. Rajpal; 6. Kangsa; 7. Rajmoyil; 8. Horinpangjor; 9. Kochudola; 10. Kangkuya; 11. Bajar; 12. Kengya; 13. Guti; 14. Gurjal.

3. Next follow a great number of winter rices, which are of rather a fine quality, and are transplanted into high fields, generally as a second crop, especially where the soil is free. Sometimes, however, the summer crop is omitted, and at other times, in very rich soils, a third crop (generally of pease) is produced. These kinds of rice are particularly valuable, as their straw is almost the only tolerable forage that is procurable. In ordinary years these sell at one rupee for the heavy *man*, which is at the rate of 48 Calcutta sers or about 98½ lbs. for the rupee. They are used chiefly boiled; but some is made into Chira, and a preparation called Khoyi is made from the two last mentioned in the following list, and these are one-eighth dearer than the others.

1. Soni; 2. Varibanggola; 3. Chhotosoruna; 4. Kautormoni; 5. Bohumali; 6. Duyini; 7. Bokori; 8. Dumora; 9. Boroputra; 10. Chaupor; 11. Morichdal; 12. Malisa; 13. Munggimalisa; 14. Elayi; 15. Josa; 16. Kartiksali; 17. Subondori; 18. Layudumo; 19. Kesorwoti; 20. Chengga; 21. Samrosh.

4. The very finest rices in this district are inferior to those of Patna; but in ordinary years they sell here at 30 sers for the rupee, or at the rate of 36 Calcutta sers, or of 73¾ lbs. for the rupee. They are transplanted into high land, generally of a stiff clay, and this rarely admits of two crops. They are almost always used boiled, and are very seldom prepared in any other way. The straw is the best fodder for cattle. The kinds are only three.

1. Chondonchur; 2. Kalonelya; 3. Birnabphul.

The rice that is intended for seed must be well dried in the sun, and is preserved in a kind of straw bags which enclose it on all sides, which contain about 82 lbs. and which

are preserved on a bamboo stage at some distance from the earth. Except in a very few places it is not the custom, in this district, to prepare the seed by moistening it so as to occasion it to sprout before it is sown. It was near Nawabgunj only that I heard of this practice.

The ground for rice is ploughed, until the surface is well broken, and after every double ploughing (one lengthwise and one across) it is smoothed with an instrument called a Moyi. These operations are performed, whenever there is no crop on the ground, and whenever the earth is soft enough to admit the plough, and the number of ploughings depends much on the nature of the soil. In some three double ploughings are quite sufficient, in others more than double that number is required.

The field after having been ploughed once, and smoothed with the Moyi, is sown broadcast, then ploughed across, and smoothed. If the rice is intended to be transplanted, the seed is sown very thick, generally on poor high land. In some parts this pays no rent, because no crop is taken from it, and it serves only for pasture. Where the soil is a rich clay, although stiff, this land after having produced the seedlings gives a crop of cotton and Sorisha, in which case it pays a high rent; but in other places this land produces a winter crop, and pays the usual rent. For every 10 acres that are to be transplanted one should be sown for seedlings.

Rice that is sown broadcast, and is not intended to be transplanted, ought to be harrowed with a kind of rake, drawn by oxen, and called Bida. The intention of this is to destroy weeds and superfluous plants of rice, so that the corn may come up in little clumps, nearly as if it had been transplanted. The same effect in some places is produced by dibbling a few seeds into holes at every span's length from each other. This kind of rice also requires to be weeded with a spud (Khurpi); but I do not think, that the farmers of Dinajpoor are very careful in this operation.

The low lands require no manure. The higher lands receive very little; but all that can be procured is given to the summer rice, which is to be followed by winter crops, except where much sugar-cane, tobacco, or other valuable article is cultivated, in which case these are allowed almost the whole manure.

When the rice is near ripe, it is a common practice in this

district to lay it quite flat on the ground, which is done by a man at each end pushing a bamboo over the field. Various reasons are assigned for this. It is said, especially in the north-west parts of the district, where the practice is most common, that it in some measure secures the field from the depredation of thieves, who according to the most moderate computation compose six-sixteenths of the men in these parts. It is also said, that it prevents shaking, that it gives time for harvest, as the crop will receive no injury, if left on the ground for a month after it is ripe, and finally that by this operation the reaping is facilitated, for the reaper when at work always sits on his heels. It is chiefly the second and third kinds of winter rices, that are managed in this manner. In reaping the coarse kinds of rice, the straw of which is not used for fodder, nothing but the ears are cut, and where the fodder is coarse, only about a foot of the straw is cut with the grain. In the finer kinds the straw is cut close by the ground.

The ears and corn are carried home by the reaper to the farmer's house, and is kept in small rude stacks, until it can be trodden out by oxen walking over it in a circle, which is always done in the course of a month after it has been reaped. The straw, where in any considerable quantity, is preserved in small stacks very ill fitted to resist the weather, and not thatched. Indeed before the rainy season commences, the quantity is generally so much reduced, that there is room in the storehouse or barn for the whole.

The grain is dried in the sun, and then preserved in the house. Poor people have a large cylindrical basket or two, which stand in an end of their house, and each holds about 6 *mans* Calcutta weight, or a little more than 492 lbs. Large farmers have storehouses, in which the rice is deposited on a bamboo stage, to keep it from the ground. Principal people have round storehouses, of which the walls are made of bamboos interwoven together, and plastered with clay and cowdung intermixed. The roof is conical and thatched, and the whole in size and shape resembles a common stack of corn. These are by far the best and safest granaries in the district, as in case of fire two or three active men with a long bamboo may push off the roof, and the grain will suffer little injury.

The quantity consumed every year in the other granaries is very considerable.

Farmers always keep their rice in the husk, until they want to use it, or to carry it to market. Sometimes indeed they load their cattle with the grain in the husk, and it is very seldom indeed that they carry clean rice to market, the common practice with them is to sell half-cleaned rice. This may with some proceed from a want of sufficient skill in the economy of labour; but there is reason to apprehend, that more commonly it is employed with a view of passing their grain on the merchant as better cleaned than it is in reality.

The operation of cleaning is performed entirely by the women, is very laborious, and is generally done by an instrument called a Dhengki. This is a wooden lever, usually about six feet long and six inches in diameter, that moves on a small bolt passing through it and two cheeks, which are driven into the ground, until the bolt is about 18 inches high. Under one end of the lever is fastened a cylindrical piece of wood, about 18 inches in length and 6 inches in diameter, the lower end of which is surrounded by an iron hoop. This serves as a pestle, that is raised by the lever, and falls down by its own weight, and the power is increased by the bolt, that serves as a fulcrum, being placed at five-eighths of the whole length of the lever from the pestle. Two women work this machine, one alternately presses down the end of the lever with her foot to raise the pestle, and then by removing her foot allows the pestle to fall. The other removes the beaten grain, and puts fresh into the mortar, which in this country is merely a circular hollow in the ground with a piece of wood in the bottom to receive the blow. The employment of the woman who moves the lever is laborious, and she is usually relieved by the other; but sometimes one woman performs the whole labour, and has a cocoa nut with a long handle, by means of which she moves the grain. In place of the Dhengki some women, who cannot leave their own houses on account of a young child, and who cannot find a companion, beat the rice in a wooden mortar with a long wooden pestle, which they raise first with one hand and then with the other. This is not so laborious as the Dhengki; but is not so effectual.

All the coarse kinds of rice, and all the winter rice that is to be exported, which forms a great part of the second class of winter rices, are cleaned by boiling. A quantity is put into an earthen pot with some cold water, and is boiled for one hour. It is then dried and beaten, and the facility with which this is done, and the little waste in cleaning, does more than compensate for the expense of fuel. It is not lawful for a Brahman to use this kind of rice. When not boiled the rough rice is merely dried in the sun, then beaten, and the grain, bran and husks are separated by a fan (Kula). The quantity cleaned in this manner is comparatively so small that in general estimates it may be altogether omitted. Concerning various important circumstances in the operation of cleaning rice, I found the accounts, given by both merchants and farmers, vary in a manner that I did not expect, and which, I have no doubt, arose from a general consciousness of fraud. I found no one who could or would tell me how much clean rice he usually procured from a given quantity of rough grain, and the accounts which I received of the rate of hire varied considerably.

In other parts of India it is usually stated that two measures of rice in the husk give one measure of clean grain; if, therefore, the average weight of a measure of each kind of grain is ascertained, it will be easy to know what proportion of clean rice can on an average be procured from a given weight of grain in the husk. In order to ascertain this I weighed 10 different samples of rice, taken at different times and places, and each containing a cubical foot of rough and an equal quantity of clean rice, as usually exposed in markets. The following is the result in ounces avoirdupois :—

1. 536¼ rough, 755 clean; 2. 534¼ rough, 764 clean; 3. 543 rough, 731 clean; 4. 541 rough, 764 clean; 5. 528 rough, 754 clean; 6. 540¼ rough, 762¼ clean; 7. 544 rough, 758 clean; 8. 523 rough, 761 clean; 9. 533 rough, 760 clean; 10. 537 rough, 750¼ clean; average, 536,35 rough, 755,65 clean.

These differences are owing in some measure to different qualities of the grain, but chiefly to different degrees of moisture; and in several trials that I have made I have found the grain chiefly affected by moisture, which produces greater changes, both in the bulk and weight of the grain, than in those of the husks and bran. This allows much room

for fraud, especially in retailing, for I have known that one ser weight of rice bought in the market has been reduced to three-fourths of a ser, merely by having been dried in the sun. On the usual estimate of rough rice giving one-half by measure of cleaned grain, and on the average difference of weight as taken from the experiment now related, every 40 sers' weight of the former should give $28\frac{17}{100}$ sers of the latter.

Not having been entirely satisfied with this average, I made a set of 10 experiments on 10 samples of rice of various kinds, each containing one cubical foot of rough grain, which I had carefully cleaned by boiling, and then carefully dried. The result will be found in the Appendix. From this it will appear that in fact the clean rice amounts to considerably more by measure than one-half ($\frac{5534}{10000}$) of the rough grain, and that each *man* of rough rice will give rather more than 30 sers (30,054,668) of clean. I tried only one experiment on rice beaten without having been boiled, as in this district that is of less importance. The following is the result:—A cubical foot of old winter rice of the second quality, when dried, weighed 551 ounces avoirdupois. On being beaten it gave 796½ inches of entire clean rice, and 63½ inches of broken grains.

The entire clean rice weighed 354 oz.; the broken rice, 26¼ ditto; the bran, 21 ditto; the husks, 150¼ ditto: total, 552 oz.

In this district the most usual manner of paying for cleaning rice thoroughly is for the owner to give the labourer 23 measures of rough rice, and to receive back nine measures of clean grain, if it has been cleaned by boiling, and eight measures, if it has been cleaned without boiling. In other parts the woman takes 24 measures of rough grain, and delivers 10 of clean. Now on the usual estimate of one-half of the grain by measure being clean rice, the woman in cleaning rice by boiling would, in the first case, procure rather more than one-fifth part of the grain, in the latter case she would receive one-sixth part; but according to the experiments which have been detailed, when she received 23 measures and delivered nine, she would have about $\frac{15}{51}$ or $\frac{3}{10}$ parts of the clean grain for her trouble; and, when she received 24 and delivered nine measures, she would have nearly $\frac{41}{100}$ parts of the grain, or about one-fourth. According to the experiment that I made on cleaning rice without boiling, the woman who

receives 23 measures and delivers eight, would for her trouble have $\frac{13}{53}$ parts, or nearly one-fourth of the clean grain, besides a considerable quantity of broken grains, which are very good food. On the whole, I am persuaded that the value paid for cleaning the rice in this district cannot be possibly estimated at less than one-fifth, and may more probably be taken at one-fourth of the whole grain produced, after deducting the seed; for although some is exported in the rough state, this is made up by the additional hire which the cleaners receive for beating the rice in various other ways, that will be just now mentioned.

The most usual of these preparations is called Chira, of which there are two kinds, Siddho and Alo. The first is the most common, and is made thus. Some rice in the husk is boiled in water for about an hour. It is then dried, and beaten to separate the husks. It is then put little by little into a wide-mouthed earthen pot over a fire and heated a little, after which it is again beaten, while still hot. By this it is rendered flat, and is sold in very great quantities, chiefly for consumption in the district; but some is also exported. The Dhengki used in this operation is rather heavier than common. On an average of two experiments carefully made, one cubical foot of winter rice in the husk, which when well cleaned weighed 580 ounces, gave 1379 cubical inches of chira, which weighed 402 ounces. The husks weighed 137 ounces, and there were seven ounces of rice in the husk which had not been broken in the operation, so that 34 ounces were lost, as I am told is usual in this operation. Chira sells by weight considerably higher (19 per cent.) than rice of the same quality. The ceremonies of cooking being very troublesome, many of the natives kindle a fire only once a day. This is generally done in the evening, when they make their principal meal. In the morning and at noon they eat somewhat that does not require to be cooked, and Chira is one of the most common meals of that kind. Those who can afford the expense mix it with the extract of sugar-cane (Gur), or with molasses, and form cakes or balls, which are eaten without addition. These balls are of two kinds, one in which the Chira is previously parched, the other does not require this preparation. Such people also mix the Chira with milk and tamarinds, or with sour curdled milk (Doyi). The poor

either eat the Chira without addition, or moisten it with a little water, and, if they can procure these luxuries, season it with a little salt and some acid fruit.

The Alochira is prepared by steeping the rough grain a whole night in cold water. It is then parched, and beaten in the husk, which finishes the operation. The Alochira is little used, is dearer than the other, and is eaten in the same manner. The next most common of these preparations is Khoyi. The rough rice, after being dried in the sun, is exposed a whole night to the dew. Next morning it is dried in the sun, and is afterwards parched in a wide-mouthed earthen pot, of which a part is broken from one side in order to give readier access. A small quantity (half a pound) is parched at one time, and must be carefully watched to sweep it out when it is ready. The grains swell very much, burst the husks, and become white. The operation is sometimes performed in a pot without addition, at others sand is put in the bottom, in which case the grains become rounder. That prepared on sand is considered as best. Two Bisas of the rough rice fit for this preparation usually sell for a rupee and a quarter, and give 10 Bisas of Khoyi, which will sell for about a rupee and a half. The labour is so intermixed with that of other kinds that it is impossible to say how much a person can make in a day, for this preparation is made chiefly by those who prepare sweetmeats. This Khoyi is seldom used by the poor. It is often eaten mixed with milk fresh or curdled, but the usual manner of using it is to mix it with molasses or the extract of sugar-cane, so as to form what is called Murki. This is eaten by all who can afford it, either by itself or with milk. The Khoyi mixed with molasses is also made up into balls or cakes, that are sold by those who prepare sweetmeats.

The next preparation, called Muri, is made by women. Coarse rough rice is boiled for about two hours, and then dried in the sun. It is then beaten with a heavy Dhengki. The grain having been cleaned is then dried, and about five or six lbs. at a time are heated for half an hour in a flat earthen vessel, adding a little salt, and agitating the vessel well. The rice after it has been heated is then parched, in the same manner as khoyi, but it does not swell so much. One measure of rough rice gives only three measures of Muri.

The poor people eat this sometimes with the addition of a little oil and salt, but more commonly by itself. Rice that has been cleaned without any precaution is also frequently parched, and is used in the same manner; but it does not swell so much.

Wheat.—In this district wheat is but a small crop, and is generally sown after a summer crop of rice has been taken from the ground, which in that case is manured, and gives two crops every year. The rice is a full crop; the wheat is scanty. Along with the wheat, on rich soils, are often sown Sorisha and lentils. On sandy banks of rivers it is often sown mixed with barley and lentils. The wheat is ground in hand mills, after having been washed and dried in the sun. The mill is so imperfect that it reduces only a part to fine flour. In this district 40 measures of wheat give 15 of coarse flour (Ata), and 15 of fine (Moyda). The remainder is bran. Wheat commonly sells at 35 sers (96 s.w.), or 86¼ lb. for the rupee. The fine flower sells at about 20 sers, or 49¼ lb. for the rupee. The coarse, which contains much bran, sells at ½ rupee the *man*, or rather more than 65¾ lb. for a rupee. Both men and women work at the mill. Two persons will require three days to grind and clean 1 *man* (98½). The fine flower is used for making sweetmeats; the coarse is formed into unleavened cakes that are commonly fried in butter. Neither the Hindus nor Moslems of this district possess the art of fermenting bread. The straw is considered as unfit for fodder.

Barley.—Barley is cultivated in the same manner as wheat, is generally consumed by the farmers who raise it, and is almost always used immediately after it is cut. It is first washed; then dried in the sun; then parched in an earthen pot; then beaten with the Dhengki or pestle, which reduces it to a coarse flour that is eaten by the poor, who mix it with cold water, and, if they can, add tamarinds, or sour curdled milk, or molasses. The straw is considered as unfit for fodder.

Meruiya.—The Meruiya is commonly raised by a curious manner of cultivation, and chiefly in the poor lands of a loose soil, that are only cultivated once or twice after a fallow of two or three years. The field, from about the middle of October until the 12th of April, is allowed six double ploughings. It

is then ploughed and sown with summer rice, and this is covered by the plough. Ten or 15 days afterwards seedlings of the Meruiya are transplanted into it, and at the same time furrows are drawn throughout, at two or three cubits from each other. In these are placed seeds of the Oror. The rice is cut in the end of August, or beginning of September; the Meruiya about 10 days after; the Oror is not ripe until the following March. This kind of cultivation is confined almost entirely to the northern part of the district. It is there also that the common millet is usually reared, and that in very small quantities; but as it ripens early, in general before the rivers swell, this crop seems very capable of being extended to all the lands that are inundated. In years when the crop of rice has failed or has been scanty, it is usual, in some parts of this district towards the N.W., to sow both meruiya and millet on the rich lands that produce summer rice; and the practice is judicious, because they ripen much earlier, and procure an earlier relief. In ordinary seasons, indeed, the millet seems to be sown in very small quantities, just to keep the seed in case it should be necessary to use it.

Leguminous plants.—The Thakuri-kolayi is sown on high land in a loose soil, and generally either on the land which has produced the seedlings of rice that have been transplanted, or on poor land that is only cultivated occasionally, or as a crop in the intervals between those of sugar-cane, when there is no time for any thing more valuable. It is also sown, after a single ploughing, among the stems of growing cotton, and sometimes is sown intermixed with summer rice. The entire grain of every kind of pulse in this district is called Kolayi; when cleared from the integuments, like split pease, it is called Dail. Before it is used Thakuri is always split, and freed in some measure from the husk. This is done in two manners. 1st. Most commonly it is dried in the sun, and then ground in a hand mill. This splits it, but removes only a small portion of the integuments. In this state it is boiled by itself with capsicum, turmeric, salt, and oil or butter, if these can be afforded, and is eaten with boiled rice. 2d. The pulse is mixed with a little oil; then dried a whole day in the sun; then ground in the mill and fanned, which removes all the husks. This is used in the same manner by the rich. A little is parched before it is ground; but this is

seldom used, being considered as heating. The straw is of no use, except to burn. Its ashes are sometimes eaten in place of salt. The pods and bran are good forage for cattle. The pulse sells at 60 sers the rupee, which is at the rate of 72 Calcutta sers, or 147¾ lb.

The Khesari is a coarser pulse, and is generally sown on low moist land of a free soil among the growing rice, and ripens after this is cut; so that the only trouble is the sowing and reaping. In other cases it is sown as a third crop, after one of summer and another of winter rice. This requires a high rich soil, in which the winter rice ripens in November. The field is ploughed once. The seed is sown broadcast, and it is reaped in the end of March. It is split after being dried in the sun, and the bran separates readily from the pea. It is dressed in the same manner as the Thakuri, and is the common fare of the fourth rank of people. The fifth and sixth can seldom afford even this. The common price of the entire grain is 80 sers, or 96 sers Calcutta weight, or 197 lb. for the rupee. Its straw is of no use.

The Mosur or *Lentil* is sometimes sown as a winter crop, after a summer crop of rice has been cut, in which case it is usually accompanied by flax; but more commonly, especially in the south, it is sown mixed with the different kinds of mustard, or with wheat and barley. It is prepared in the same manner as the Khesari, and is reckoned rather better in quality. It sells usually for 50 heavy sers, or 60 Calcutta weight for a rupee. Its straw is not used. The Harimug is raised in very small quantities. It is sometimes sown by itself, as a winter crop after summer rice; but another crop of that grain cannot follow it in the ensuing year, for it is ripe in May and June. It is also sown among cotton. It is split like the Thakuri, is still more valuable, and one heavy *man*, or 48 Calcutta sers, sell for a rupee. Oror is the next most common pulse, and is prepared in the same manner. It sells for about 35 heavy sers, or 42 Calcutta weight for the rupee. I have already mentioned one manner in which it is cultivated; but in a few fields near the house it is also reared by itself, and occupies the ground for the whole year. The greatest quantity, however, is raised in a hedge that surrounds almost every field of sugar-cane. It grows from six to 10 feet high, and its stems are woody, and serve for fuel.

The common field pea is the next most common pulse. It is prepared like the others, and is reckoned nearly of as bad a quality as Khesari. It is raised on high rich land as a winter crop, sometimes after a summer crop of rice; at others it is sown among the growing winter rice in October, and it is even sown after two crops of that grain. It sells for 50 heavy sers for the rupee. The straw is not used. The Chona is nearly as much cultivated as the pea. It sells usually for 35 heavy sers the rupee, and is reckoned an excellent food for both men and cattle. Its straw is not used. It is sown chiefly near the Nagor and Mohanonda, on land which has given a crop of rice. The variety of the same plant with a white flower is more valuable, but very little indeed is raised in this district. All the pulses are thrashed with a stick. The natives have no flail.

Plants which produce oil.—Of the seeds which produce oil by far the most common is that called Sorisha, which is raised in all the southern and eastern parts of the district. It is the great winter crop raised on land that has given a summer crop of rice; but it is frequently intermixed with wheat, lentils and some other pulses; and it is also sown with cotton, of which considerable quantities are raised in these parts of the district. It is trodden out by oxen, and sells usually at about 48 Calcutta sers for the rupee.

The Turi is that which is cultivated in the north-west part of the district, mostly as a winter crop after summer rice; but sometimes also on poor land, which gives no other crop. In these parts it is not the usual custom to mix anything with this plant. There is very little, if any difference in the qualities of the oils; but the Turi sells for about one or two sers for a rupee, as it is reckoned to give a greater quantity of oil.

The Rayi is raised only in very small quantities. The oil being very hot is reckoned good for eating; but it does not answer for anointing the body. The seed is beaten with several acid fruits into a kind of pickle, as I have before-mentioned. It is chiefly raised in the cotton fields of the south-east part of the district. It does not sell higher than Sorisha.

The Tora is generally raised along with the Rayi in cotton fields. The quantity is so small, that I received no information concerning its peculiar qualities.

In Bengal there are two kinds of *Sesamum* cultivated. The seeds of both are black. The quantity raised in this district is so small, and confined to so few parts, towards the north chiefly, that I had no opportunity of examining its botanical affinities. It is raised on the poor parts of a light soil, that require frequent fallows. The oil is used only for the lamp; but the seed is sometimes mixed with the coarse flour of rice to make cakes.

Linseed is raised in still smaller quantities, and is usually sown in rows in cotton fields, or among lentils. The seed is expressed for oil, the stem is considered as useless. The oil is only used for the lamp. The farmer sells all these seeds to those who express the oil, whose process will be detailed in the account of manufactures. The oil-cake is partly used as food for cattle, and partly for manure.

Profit on this kind of cultivation.—From the foregoing account it will be evident, that as the crops are so much intermixed, it would be extremely difficult to form an estimate of the profit, which attends each separately. Neither can any charge be ascertained for the different steps of each manner of cultivation, for it is not customary to perform these by job-work; but a man who has a plough cultivates a certain extent of land, in which he has a proportion of many of the different grains above-mentioned. What the actual cost of each therefore may be, it would be very difficult to ascertain; but we may make a near approximation to the cost of the whole. It is a common practice in this country to employ persons to cultivate the land, for a share of the produce, and this share is usually one-half. Sometimes the landholder receives the whole straw; but that is not common. Now the condition of the person who cultivates for a share, is generally allowed to be better than that of a common labourer; and indeed it is evident that it must be so, otherwise no man would keep the stock, that is necessary for carrying on the cultivation. We may therefore safely conclude, that the farmers net gain is more than the difference between the rent and the half of the produce. The lands that are most eagerly sought after by the farmers, are low rice fields which produce nothing except that grain, and in many parts, where I had an opportunity of forming a tolerable opinion of the crop and rent, I found, that the produce of the grain might be about

two rupees a bigah where the rent was eight anas, so that, deducting one-half for the expense of cultivation of every kind, the farmer had a clear profit equal to the rent, or to one-fourth of the grain produced. He has besides a quantity of straw, with which in remote parts he keeps cows, from whence he derives a small profit. Near Maldeh and Dinajpoor the farmers sell the straw, and there their produce is somewhat more considerable. Farther, tradesmen who have farms, generally employ the people who cultivate for a share; but in some places they hire labourers, and I procured the following estimate on two large bigahs nearly equal to an acre, or to three bigahs Calcutta measure, of low clay land cultivated with rice alone:—

To 11 ploughs for one day, 1 r.; to 10 men planting, 8 anas.; to 8 measures of seed, 4 anas; to reaping, 12 men, 9 anas; to rent, 1 r. 6 anas; to various little expenses not included, 5 anas. Total, 4rs.

I have estimated the medium produce of such land in rice, at 2 rs. a Calcutta bigah, or at 6 rs. for the quantity here stated. So that the profit, besides the straw, is to the rent as 32 to 22. If we estimate by the price charged for reaping, which is sometimes done by the job, at from $\frac{1}{10}$ to $\frac{1}{18}$ of the produce according to the distance of the field, and take the medium of these two rates, the produce would be $7\frac{1}{2}$ rs.; but this includes the straw, which may nearly make up the difference. According to the estimate founded on cultivation by share, the profit, exclusive of straw, equals the rent, according to the estimate founded on cultivation by jobbing; but including the straw, it is double the rent. This however, is the land from whence most profit is derived, for it is most eagerly sought after by the farmers. We ought not therefore to allow that upon the whole cultivation of grain, the farmers have more profit than the amount of the rent, nor can we allow that they have less. Indeed it will be afterwards seen, that the actual rental in all probability, falls very far short of a fourth part of the produce; but this is probably owing to fraud and mismanagement.

Plants cultivated as vegetables for the table.—In my general statement of the manner in which the rented land is occupied, I mentioned, that 500,000 bigahs are occupied by houses and gardens. Of these 140,000 may be occupied by

plantations, of which I have already given some account in the part of this report which treats of the trees, (see bamboo, No. 1; tamarind, No. 63; mango, No. 76; jak, No. 108.) Vegetables cultivated for the kitchen occupy 100,000 bigahs in the gardens, and perhaps, in justice we ought to have added a great part of that which has been stated as the mere foundation of houses, for the roof of almost every hut is covered with gourds. Not however, to enter too minutely into such matters, besides the 100,000 bigahs in gardens, that are cultivated with vegetables for the kitchen, probably 150,000 bigahs in the fields are applied to the same purpose, making in all 250,000 bigahs, and this cultivation must be considered next to that of grain, as the most important in the district, both in respect to extent and to the value of the produce, which cannot be less than 1,000,000 rs. a year.

The plants, which I have included under this class, are reduced by the natives to four kinds: 1. Mosala, or hot seasoning. 2. Torkari, or succulent roots, stems and fruits, that serve chiefly as a convenient receptacle for the salt, oil, and seasoning, with which they are dressed. 3. Sak, the leaves and tender stems of plants that are applied to the same purpose. 4. Ombolotas, or acid plants used as seasoning.

I. Mosalas. Although these do not occupy the largest extent of ground, they amount to the greatest value, and some part of them is exported. The different kinds are placed nearly in proportion to the value of each that is raised in this district.

1. Ada, ginger. I have not seen the plant in a state fit for botanical examination; but suppose, that it is the *Amomum Zinziber* W. It is cultivated chiefly in two or three of the northern divisions, where the soil is free; but it is surprising that it should not also have been raised in the south-east divisions, as their soil is excellently fitted for it, and the cultivation is profitable. The farmers as an excuse for their neglect allege, that porcupines destroy the roots.

Poor high land, which is seldom regularly occupied, is most commonly chosen for the purpose. After a fallow, it is ploughed eight times in spring. In the hot season, from the middle of April until the middle of May, it is planted. The field is divided into beds about three feet wide, which are separated by trenches of half the width. The beds having been

dunged, the small roots reserved for seed are placed on them, are covered with a little straw, and then with earth from the trenches. In the end of August or beginning of September weeds are removed, and some more earth is thrown on the beds from the trenches. The roots are raised in the end of February or beginning of March. The smaller roots are preserved for seed, of which 4 *mans* (394 lbs.) are required for the bigah of 80 long cubits (about 900 lbs. an acre). The produce of roots fit for sale in a good crop, is three times the amount of the seed, besides small roots that serve for being planted. The merchants make advances for most of what is cultivated, and give one rupee for from 3 to 4 *mans*, which in a good crop is from 3 to 4 rs. for a bigah. The merchants make advances for most of what is cultivated, and give 1 rupee for from 3 to 4 *mans*, which in a good crop is from 3 to 4 rs. for the bigah. The rent is from 4 to 6 anas.' This account of the produce of poor land, which was given by an agent of a landholder, seems to be under-rated. A farmer said, that on rich land on which he cultivated it, he procured from a large bigah (⅓ acre) 80 heavy *mans* (96 s. w. the ser.) worth 20 rs. The seed he stated at 20 *mans*. At this rate, an acre requires 39,42 lbs. for seed, and produces 15,768 lbs., worth 40 rs. or about 394 lbs. for the rupee. The merchants dry it for exportation. In other parts of the district no more is raised than serves for the consumption of the country; and except as a medicine, it is always used raw. It is sometimes mixed with curries, and the natives, before they begin to eat, often take a slice of this root covered with salt in order to increase the appetite, just as in Europe some persons are reduced to take a glass of wine.

2. Horidra, turmeric. Not having seen this plant in flower, I cannot say whether it is the *Curcuma longa*, or the *rotunda* of the botanists, because both plants are cultivated under the same name. This plant requires a free soil, and being chiefly used in the district, its cultivation is more generally extended. In the richer fields it is managed much in the same manner as the ginger, and produces, according to the farmers, about 1100 lbs. an acre when dried, which operation is always performed by the cultivator, as the merchants make no advances. The raw root is boiled a little and then dried in the sun. In this operation it shrinks greatly, and loses much weight,

and is sold by the farmers for a little more than 33¾ Calcutta sers, or 69⅓ lbs. for the rupee. Like turmeric, in the northern divisions, it is cultivated on very poor high land after occasional fallows; and, where it is allowed a richer soil, cotton is raised in the same field. From the beginning of January until the beginning of April the field is ploughed eight times. In the course of the two following months the small roots are planted in furrows, that are drawn at a cubit's distance throughout the field, and they are covered by the plough. Seeds of cotton are placed between the rows. It is weeded occasionally with a spud, and is raised in the end of February. The cotton ripens in December, January and February, and its capsules are gathered as they come to maturity. This cotton is of the black seeded kind, and is reckoned of a very bad quality, so that it sells lower than even west country cotton. The produce stated to me on one bigah of 85¼ cubits of 20 inches was—

1½ *man* (101 s.w. the ser) of dry turmeric, 2 rs. 4 anas ; 10 sers of cotton wool cleaned, 1 r. 2 anas; Total, 3 rs. 6 anas ;

which is at the rate of 7 rs. 4 anas 6 pice an acre from poor land. Turmeric is used raw as a medicine, and dried both as a dye, and as a seasoning that enters into every curry (Byangjon), where it can possibly be afforded. Its powder is also occasionally added to the oil, that is employed as unguent.

3. Longka morich, *Capsicum annuum*. Of this the consumption is very great, and it enters into every *curry*. Sometimes the poor eat it alone with rice, being unable to procure oil to make a curry. It is also used in medicine. The quantity required being great; and a loose soil being necessary, where there is a great extent of stiff clay, large fields of it are required on the adjacent lands that have a free soil; but where the whole country is of a loose soil, there are no fields of this plant, and a few bushes in each garden suffice for the consumption. The field is thoroughly ploughed between the 12th of May and the 14th of September, and then is smoothed with the instrument called Moyi. In the following month the seedlings, which have been raised in the garden, are transplanted at a span's distance from each other. The plants require three weedings, and produce ripe fruit between the 12th of January and 12th of March. The fruit is gathered

as it ripens, is dried in the sun, and kept in baskets placed on a bamboo stage at some distance from the ground. It will preserve for more than a year. It is neither sold by weight nor measure; but the farmer carries a basketfull to market, divides it into small heaps, and sells each of these for as much as he can. I cannot therefore state the quantity or value of the produce of a bigah, but it is a valuable crop.

4. Kumoriya, Piyaj, onion, an *allium* not mentioned by Willdenow, nor in the Encyclopédie.

5. Rosun, Garlic, *Allium sativum* W. Both these plants are cultivated in the same manner, and their use is confined to Muhammedans; for they are an abomination to the Hindus of Bengal, although no seasoning seems so well fitted for their insipid food. They are the only produce of the garden, that is artificially watered, and as they will thrive on any soil where they can procure water, the greatest quantities are raised on the sides of tanks in the stiff clay land. The field or plot is divided into small beds carefully levelled, and separated by little canals that convey the water to each. All the remaining articles are cultivated on a very small scale in gardens, and except the last are sown in the end of the rainy season, and ripen as the heats of spring commence.

6. Methi, *Trigonella foenum græcum*, W. Its leaves are used as a green (Sak). The ripe seed is put into curries as a seasoning, and its flower is mixed with the oil with which women anoint their skins, as it communicates a good smell. It is also considered as a medicine.

7. Sulpha, fennel, *Anethum foeniculum*. The leaves are used as a green. The ripe fruit is used as a seasoning in curries, and is employed as a medicine.

8. Dhoniya, Coriander, *Coriandrum sativum*. The ripe seed alone is used, and is employed both in curries, and to chew with betle; and is considered as a medicine. Rows of this plant are often sown in the fields of the pulse called Chona.

9. Joyain, a species of *Ammi* not yet described, unless the plant called *Athamantha chimensis* may have been intended, which is not improbable. It is very seldom used in curries, but is chewed along with betle, and is employed in medicine.

10. Randuni. This and Methi are much used in parti-

cular kind of curries, which after having been half dressed in one pot, are poured into another that contains hot oil and these two seeds. It is also used in pickles, and as a medicine. It is of the order of the *umbelliferæ.*

11. Mauri Anise, *Anethum graveolens.* Is rarely used in curries, but is chewed with betle, and employed as a medicine.

12. Choyi, *Piper sylvestre* E. M. Small cuttings of this are planted in the shade, and are allowed to climb up any sort of tree. It continues to live for many years. The old stems possess considerable pungency; and after having been beaten, or cut into small pieces, are dressed with curry to supply the place of black pepper, which in this district is an uncommon article of luxury.

II. *Torkari.*—1. Bartoki, Begun, *Solanum insanum, et melongena* E. M. The natives reckon many kinds which differ in the size, shape, and colour of the fruit, but I am inclined to think with the authors of the Encyclopédie, that the whole are merely varieties of one species. The kind that is most commonly cultivated in this district, has the fruit in shape of a pear, and very large quantities of it are raised. The unripe fruit is a very common ingredient in curries, and is cut in large pieces, fried in butter, and eaten with rice. It is also roasted in the ashes. By many Europeans it is supposed to generate lice in those who eat it, which is certainly a mere prejudice. The fruit is no doubt wholesome, and dressed in various manners is a very good vegetable. The seeds are sown in a small bed in the beginning of the rainy season, and about the middle of July the seedlings are transplanted into the field at about two feet from each other. The field requires to be high and of a light but rich soil, and must be kept clear of weeds. Should ants attack the young plant, some ashes must be sprinkled on the field in the morning. Fruit fit for eating begins to be obtained about the end of September, and continues procurable until the hot season. The fruit is not sold by weight nor measure; but a bigah of 80 large cubits produces about six rupees worth, which is at the rate of almost $13\frac{1}{3}$ rupees an acre.

2. Sokorkondo Alu, sweet potatoe, *Convolvulus Batatas* W. This root was the original potatoe known in Europe, and communicated its name to the more valuable plant from

America, which is not yet cultivated by the natives of this district. The sweet potatoe is much cultivated, wherever the soil is free, and is highly valued by the natives. Its root is a common ingredient in curries; and, after it has been boiled, and the stringy parts separated by the hand, it is mixed with a small proportion of rice flour, and formed into balls which are fried in oil. The kernel of cocoa-nut and extract of sugar-cane are sometimes enclosed in the middle of the balls. The roots are sometimes eaten raw, and the leaves are used as a green. It is propagated by planting the smaller and otherwise useless roots in the middle of the rainy season. The field must have been well ploughed and smoothed, and the roots are planted with the dibble. Weeds must be carefully removed. The roots come in season in October, and continue until March, and are dug as wanted for sale or use. The value of the produce is nearly the same with that of the last mentioned article.

3. Mukhi Kochu, Gungri Kochu, Chaumok Kochu, Teliposar Kochu. These are all small *Arums* which are cultivated in the fields, as potatoes are in Europe. I did not see them in a state that could enable me to judge, whether they were mere varieties of the *Arum peltatum* E. M. or different species, or whether they have been described by botanists. To my taste these are a superior vegetable to the sweet potatoe; but they are not so much liked by the natives, and are used only in curries. They are mostly cultivated in the poor high lands of a free soil, that abound in the northern parts of the district. The Gungri and Teliposar are planted in the end of February or beginning of March. After four double ploughings the small roots, that have been preserved for seed, are planted in furrows, about two feet from each other, and a little dung is put along with them. In about a month the young plants are covered with earth thrown up in ridges by the hoe. In two months more they are fit for being dug. The Mukhi are planted in the commencement of the rainy season, begin to be dug in September, and last all the cold season. I received no estimate of the quantity raised on a bigah; the value may be about 3 rs. or 7 rs. an acre.

4. Potol, a species of *Trichosanthes*, that is not mentioned by Willdenow, nor in the Encyclopédie. The leaves are

used as a green, and the fruit is a common ingredient in curries, or is fried in oil or butter, or roasted in the ashes. By the natives it is reckoned a very wholesome vegetable. It is cultivated on high sandy land, and is propagated by the root, which is perennial. It is often allowed to remain three years in the same field; but then the fruit is very inferior to what is produced the first year. The root is proliferous, and five or six small ones adhere to each old plant. One of these is planted after two or three ploughings in September. They are placed about a cubit from each other. Weeds are removed, and the fruit is fit for use from February until September.

5. Mula, Radish, *Raphanus sativus.* These grow to a very large size, and are often above 15 inches in length, and four in diameter; but they are rather spongy. They are, however, a favourite vegetable among the natives, and are eaten raw, and enter into curries. The leaves are used as greens (Sak). The ground for them must be high, rich, and of a loose nature, and it must be very thoroughly laboured, which in this country requires 12 double ploughings. The seed is sown broad cast in September, and weeds should be removed in October. The plants that are superfluous are then removed, and serve the poor for a green. About the middle of November the roots begin to be in season, and continue for three months, but people of rank use them for two months only; as towards the end of the season they become coarse. The produce is not above four rupees a bigah, or about nine rupees an acre.

6. Kola, Plantain, *Musa.* I know only of one species that is cultivated in India, and it ought to be the *Musa paradisiaca* of Linnæus, as a bunch of flowers and red leaves always continues at the end of the fruit-bearing stem, unless it has been removed by accident. In this district there are three classes or kinds.

I. Kangch Kola, the fruit of which, when green, is used in curries, or is fried in oil or butter, or is boiled along with rice. It is never roasted in the ashes, as is done in the West Indies, which seems to be a loss, as the aliment is wholesome, and much more agreeable, to my palate at least, than the common food of the natives. Young shoots, with a part of the root, are planted in June or July, and begin to produce fruit

in about 14 months. After four years the fruit begins to degenerate. The roots are then grubbed, and new shoots are set in other places; for they do not thrive in the old soil. No fields are employed in this cultivation, but every farmer has a few clusters in his garden. The stems are given to cattle. A bunch of these plantains is worth about 4 anas.

II. Taliya Kola, called Dauria at Calcutta. This is cultivated exactly in the same manner. When the flowering stem (*spadix*) has formed, and just before the flowers begin to open, the tree is cut, the whole spadix, and the centre of the stem, about 2 inches in diameter, are used in curries, and are worth $1\frac{2}{1}$ ana. The leaves are used for platters, and those of one tree are worth about an ana; so that the whole tree is worth $2\frac{2}{1}$ anas. The leaves of the other kinds are too old before the fruit is ripe, and having been broken by the wind, will not answer for platters.

III. Kangthali Kola, called by the same name at Calcutta. This is commonly eaten at Calcutta under the name of Plantain, and when ripe, has a thin yellow skin, which easily separates from the pulp, and may in general be about 6 inches in length. The pulp is commonly too dry, and it is but a very poor fruit. In Dinajpoor it is worse than at Calcutta, and generally contains seed, which is always a bad sign. It is cultivated exactly in the same manner. The natives eat it sometimes by itself, and sometimes mixed with fresh milk, or with that which has become sour and curdled.

The two finer kinds, the small Banana, or Changpa Kola of Calcutta, and the rich, luscious, thick-skinned Omortoman, of Dhaka, are not known in this district. It is said, indeed, that the plantain was first introduced by one of the Rajas, which therefore must be a recent circumstance.

7. Urchhe, *Momordica Muricata*, W. This is raised in very considerable quantities on the sandy banks of rivers, that are capable of producing little else, and which are inundated in the rainy season. Little pits are made at 5 or 6 feet distance from each other, about a foot wide, and 6 inches deep. In each are placed two or three seeds in January, and they produce fruit fit for eating in the hot months of spring. The fruit, when green, is fried with oil, and is eaten with rice. It is often also dressed with fish, especially that which is half rotten. These are made into a loathsome dish, which many

of the natives eat with avidity. The produce of a bigah is less in value than that of radishes.

8. Korla, *Momordica Charantia*, W. This is used exactly like the preceding, but is sown on high, poor, sandy land, in July, and comes in season in October, lasting three or four months. Its produce may be nearly of the same value.

9. Layu, Gourd, *Cucurbita lagenaria*, W. I have already mentioned, that the roof of almost every hut in the district is covered with one or more gourds. They differ considerably in shape, which gives rise to different names; but it is needless to enter into these distinctions, as all the kinds are nearly of the same use. The fruit, when green, makes an excellent curry, especially with prawns, or other crustaceous animals of that sort. The shell of the ripe fruit is used by religious mendicants for carrying water, and poor labourers use them as vessels. A musical stringed instrument, named Tombura, is made of a round variety. In July two or three seeds are planted near the hut, and the stems are allowed to cover the roof. The fruit begins to be fit for use about the beginning of November, and continues until the hot weather of spring. Another set is sown in November, begins to be of use in March, and continues until the commencement of the rainy season.

10. Kumra, Kusmando. I have not had an opportunity of examining this plant, which is said to resemble a pumpkin, and may be some variety of that vegetable. It is used green in curries. When ripe, its pulp is beaten with the pulse of the *Phaseolus max.*, and formed into balls, which are dried in the sun, and will keep six months. They are used in curries. It is used also in medicine. It grows upon the roofs of houses or hedges. The seed is sown in the heat of May, and transplanted when the rains commence. It begins to give green fruit in August, and continues until December. The ripe fruit hung up will keep a year.

11. Mitha Kumra, Pumkin, *Schakeri schora* Hort. Mal. This plant also grows on houses, but is more commonly allowed to climb upon a small stage of bamboos erected for the purpose. It is in season the whole year. The plant lasts five or six months, and a succession is constantly secured. In Dinajpoor it is not very much used; the principal

demand for it is from boatmen, as the fruit keeps well on their voyages. It is used in curries, and is also fried.

12. Dengguya. The *Amaranthus oleraceus* of European botanists probably includes several species, and among others this, which grows to be a large bushy plant with a thick succulent stem, which is the part that is eaten, and is used in curries, especially in those that contain little water and much oil (Chorchori); but its young leaves are also used as (Sak) a green. In March it is sown broadcast in large beds. For one or two months the young leaves are used, and the plants are thus thinned, and allowed to grow large. The stems continue fit for use during the greater part of the rainy season.

13. Sim, *Dolichos lignosus W.*, and perhaps *Dolichos Bengalensis?* Of this plant, which is so common in India, I have seen no botanical account that is satisfactory. A great many kinds are cultivated, but they run so into one another that they must be considered as mere varieties, although the extremes are often very different. They have all nearly the same qualities, although some are thought better than others. They are either allowed to climb over the roof of the hut, or have a small bamboo stage erected to support them; and almost every house has two or three plants. It is an annual plant, although it has a woody stem, and the seeds are put in the ground in the end of April. After eight months it begins to produce green pods. For three months the fruit continues fit for eating. It then ripens, and is seldom used in that state, being considered as too heating. In its green state it has a strong disagreeable smell of beans, but is much used in curries, or fried with oil, or boiled along with rice.

14. Chupre Alu *Dioscorea alata* E. M. The *Dioscorea sativa* of Linnæus is a plant of which I know nothing, and I may venture to say that at least 20 species in India carry small bulbs on their stems, which was considered as peculiar to the Linnæan plant. Indeed I know no kind that does not occasionally propagate itself in this manner. All of them that I have seen cultivated may perhaps be included under the *Dioscorea alata* of Encyclopédie, although I am persuaded that there are several distinct species to which the description in that valuable work will apply. This excellent root is not a favourite in Dinajpoor, and is only used in

curries. The bulbs that grow on the stem are used as well as the roots, that are under ground. In most gardens a few roots are planted near trees, on which the stems are allowed to climb; but there is never a field cultivated with this plant, which appears to me both a salubrious and agreeable nourishment.

15. Mankochu, *Arum mucronatum* E. M. This is the *Arum macrorhizon* of Willdenow, but his definition is so bad that I prefer the name of the Encyclopédie, although I strongly suspect that the American and Asiatic plants are not of the same species as the authors suppose. This plant is preferred to the former, on account of being considered as not so heating. To my taste it is a poor vegetable. Its common size is about one and a half foot in length, and six inches in diameter, but it has been seen six feet in length, although it does not increase in thickness. Young shoots come up from the side of the parent plant, are separated in June, and planted in high dry land, generally near the house, where it receives ashes and other impurities as manure. It may be taken up in seven months, but continues to grow larger for three or four years. It is only good for eating in the dry season. It is used in curries, especially the upper end, and this part is sometimes cut in pieces, and boiled with rice. The lower end is cut in slices, dried in the sun, beaten with the Dhengk or mortar, and mixed with tamarinds. This is used as a pickle.

16. Sola Kochu. This and the two following are kinds of *Arum* that I had not an opportunity of examining. The small roots that spring from the large bulb of this *Arum* are separated, and planted on the sides of tanks or ponds, so that in the rainy season the water may reach its roots. These are planted in April, and at first receive a little water. The root is not reckoned so good as the last mentioned, and is not half so thick, but it is almost as long, and is used in the rainy season. The plant continues in the ground, and propagates itself without trouble, some roots being taken from it as wanted. It is only used in curries.

17. Anaji kochu. The petioles or stems that support the leaves of this *Arum* are used in curries, and are fit for use during the cold months. It is planted in high ground during

the rainy season. The plant requires to be renewed every year, and was new to my Calcutta people.

18. Ol. At Calcutta the root of this *Arum* is in great request, and to supply the market it is cultivated on the great scale in some neighbouring districts; but in Dinajpoor it is not a very common vegetable, and no person has more than a few, which are planted in high ground near his house. The root is generally round, is about the size of a man's head, and takes two or three years to grow to that size. Young roots are planted in the beginning of the rainy season, and are fit for use next year about the same time. It continues two months in season, and is used in curries, or fried in oil, or boiled along with rice.

19. Dhondhul, *Cucumis pentandrus* R. Mss. When this fruit is dressed while tender it is to my taste one of the best native vegetables, and is excellent in stews or curries. But the natives do not like it. A few seeds are sown in the end of the rainy season, and the plant is allowed to climb upon trees, hedges, railings, or any place in the garden that is convenient. It is fit for eating in the cold season, and is an annual plant.

20. Chichingga, *Trichosanthes anguina*. This is not much more valued than the former, and is allowed to grow in the same manner, but it is sown in April, and in the rainy season produces green fruit fit for eating.

21. Jhingga, *Cucumis acutangulus* R. Mss. The same may be said of this plant, which together with No. 19 should be included in the genus called Luffa, for the fruit of the two have the strongest resemblance to each other, and are totally different from that of a cucumber. This is the *Luffa fœtida* W.

22. Kangkrol, *Momordica dioica* W. This is cultivated exactly as the two preceding, and is very little valued.

23. Dengros, *Hibiscus esculentus* W. This is much used by Europeans in both Indies, especially in soups, but is very little valued by the natives, and is seldom to be seen in this district.

III. *Sak.*—1. Lapha, *Malva verticillata* W. For three months in the year this mallow is by far the most common green that is used by the natives of this district, and in many gardens

large plots of it are cultivated. It is sown broadcast in the beginning of the dry season, and in December begins to be fit for use.

2. Khoriya, Notiya, *Amaranthus oleraceus* W. Is of two kinds, red and green, and is in season the whole year. The red kind is sown broadcast in small beds, soon after the commencement of the rainy season; and the green kind is sown in April, after the first showers of spring. It will continue in the ground for two or three years, but degenerates after the first. The leaves and young shoots are collected when a few inches high, the stems being procumbent. The natives reckon it better than the Mallow.

3. 4. Basluk, Bethuya. There are two very distinct species of *Chenopodium* cultivated in this district, and one that grows wild; all of them are used as greens. The cultivated kinds are called Lal Bethuya and Chondon Bethuya. The wild one has already been mentioned. I cannot refer any of them with certainty to the species that are described in the Encyclopédie, or in Willdenow. Both the cultivated kinds are ornamented plants, and grow five or six feet high; but they are used when very young, and by the natives are reckoned equal to spinach. They are sown in small beds in the beginning of the dry season, are used in December and January, and are annual plants.

5. Kankhura. This is a species of *Urtica*, and perhaps the *nivea* of Willdenow. I have seen it no where else except in this district. It is a woody plant, and its bark is frequently used by fishermen to make a kind of hemp, of which they form the ropes for their nets, and all the ropes used for tracking boats are made of this material. It is propagated by slips from the roots, which are planted out in the beginning of the rainy season. There are no fields of this plant, but many gardens have a few beds. The leaves are used as a green, but are very indifferent, and the fresh shoots are cut and steeped in water to procure the fibres of the bark. It is a perennial plant.

6. Palom, Spinacia, a species of *Spinacia* of which I see no account in the botanical systems. It is probably, as palatable as the European kind, and by the natives is considered as very good. It is sown in small beds towards the end of

the rainy season, and is in use for three months from the middle of November.

7. Pirim, *Trigonella corniculata* W. This sweet plant was brought to me as the Pirim; but I suspect, that the person who brought it was careless. The Pirim is considered a good green, but not so good as spinach. It is cultivated in the same manner, and at the same season.

8. Sorisha, a species of mustard, that is much used for its grain, as before mentioned. Where it is sown too thick, the superfluous plants are removed while young, and used as a green, which is very coarse.

9. Pungyir Putika, *Basella lucida* W. This is a common resource of poor people, who find young plants growing under the parent vine, and remove them to the places, where they wish them to grow. They generally climb upon the fence, which incloses the yard, or form a little arbour above the door. They live and produce leaves the whole year, and are perennial, but degenerate after the first 12 months. It is a very poor vegetable.

10. Methi, Fenugreek, *Trigonella fœnum græcum*. The young plants that are too thick, when this plant has been cultivated for its grain, are removed and used as a green, which the natives reckon good. They are used in December. This also is the case with the three following plants. Only the smaller kind of *Corchorus*, called *olitorius* by botanists, is sometimes cultivated merely for its leaves, and these are reckoned very good. The green produced by the *Corchorus capsularis*, and by the *Crotolaria juncea* is exceedingly coarse, but much used by the poor. Concerning the kinds, that follow, I have nothing to say, but that they are not much liked by the natives, and are reared in very small quantities.

11. Sulpha, Fennel, *Anethum foeniculum* W. 12. Falita Pat, *Corchorus olitorius* W. The leaves of the capsularis are also often used. 13. Son, *Crotolaria juncea* L. 14. Konkarangga, *Amaranthus tricolor*. 15. Babur, a *Chrysanthemum* or rather Balsamita, of which I find no account in modern systems of botany. 16. Rosuniya, *Spilanthus oleraceus*.

IV. Ombolotas, or acids used in cookery. By far the

greater part of these are produced by trees, that grow with little care near villages, of which an account has been already given among the natural productions of the country: a few remain, that are cultivated in gardens.

1. Kolombok Nebu. This and the following kinds of the fine family of *Citrus* can with difficulty be reduced to any of the species described by botanists, who are always consulted with uncertainty concerning plants, that are cultivated. It ought to be included with the *Citrus medica* of Willdenow, but its leaves are blunt. The fruit has not so fine an odour as the citron, is shaped like a pear, and ends in a point like a nipple. It is rough with many longitudinal furrows, and has a thick skin. The juice is commonly squeezed among boiled rice.

2. Gongra Nebu. According to Willdenow's definition this ought to belong to the *Citrus Decumana*, but scarcely any two fruits can be more different. This is a round fruit about the size of an apple, with a very rough skin not remarkably thick, and has a juicy acid pulp. It is used in the same manner as the former.

3. Kagji Nebu, is the lime commonly used by the English. According to Willdenow's definition, this also should be a variety of the *Citrus Decumana*. The fruit is oval, about the size of a fowls' egg, and smooth. The skin is thin, and adheres to the pulp, which is a most agreeable acid. This is used in the same manner, and is often eaten with sugar.

4. Pati Nebu. This also agrees with Willdenow's definition of the *Citrus Decumana*. The fruit is about the size of a small apple, quite round with a thick projection at the point like a nipple. This is used in the same manner, and is the kind which is chiefly employed in medicine by the natives.

5. Sontora Nebu. This differs from the *Citrus medica* just as much as the Decumana does from the *Aurantium*, that is, it has obtuse indented leaves. The fruit has exactly the flavour of the citron, but its skin is thin, and the pulp very copious and juicy. It is shaped like a pear, has no point, and is about six inches long by four thick. It is used like the others.

6. Koruna Nebu. I have not seen. It is said not to be so acid as the others, and is often eaten by itself, or with a

little sugar. The natives have no oranges; but are very fond of such as come from Silhet or Bootan.

7. Chuka Palom, Sorrel. A species of *Rumex* of which I see no account in the botanical systems. It is not so much cultivated here, as in many districts, where large fields of it are reared. It is an annual, is sown in the end of the rainy season, and may be used during the cold weather. It is an agreeable acid, but it is not used as a salad. The natives indeed use nothing of that kind.

8. Mesta, *Hibiscus cannabinus* W. In this district its bark is never used for making ropes. The leaves are used as an acid green, but very rarely.

The whole cultivation of these vegetables is carried on by farmers; gardeners can scarcely be said to exist as a separate profession. For although there are many persons, who from the duties of caste, ought to act as gardeners, they have almost all betaken themselves to farming. The greater part of European kitchen vegetables and salads thrive very well, and several even of the sweet pot-herbs, such as thyme, marjoram, and mint; but the natives seem to have acquired no relish for them, nor even for the potatoe, which I saw nowhere except in the gardens of Europeans.

Having thus so far treated of gardens, I shall now mention what remains to be said on that subject. In my account of plantations I have already mentioned most of the fruits which the natives possess, but a few others remain. I shall first give a list of the whole, in the order of their respective plenty, together with the season in which they are ripe.

1. Amro, *Mangifera indica*, 12th June, 31st July; 2. Kangtal, *Attocarpus integrifolia*, 12th June, 14th August; 3. Peyara, *Psidium*, June, July; 4. Anaros, *Bromelia Ananas*, June, July; 5. Khyira Sosa, *Cucumis sativus*, 12th March, 12th June; 6. Pala Sosa, *Cucumis sativus*, 14th July, 14th October; 7. Kangkur, Phuti, *Cucumis pepo*, 12th March, 14th July; 8. Tormuj, *Cucurbita citrullus*, 11th February, 12th June; 9. Papiya, Papaya, the whole year; 10. Golap Jam, *Eygenia Jambos*, 12th April, 12th June; 11. Batabi, *Citrus Decumana*, 15th September, 17th November; 12. Tut, *Morus*, 12th April, 12th June; 13. Dalim, *Punicagranatum*, the whole year; 14. Pich, Peach, *Amygdalus Persica*, 12th May, 12th June.

The 11th and the 14th can scarcely yet be said to have made their way from the gardener of the Europeans. I saw however a few trees in those belonging to natives. The only kinds cultivated in any quantity, that deserve the name of

fruit are No. 1 and 4; and both are so much neglected in this district, that few good ones are procurable, although no doubt both would thrive admirably were adequate pains bestowed on their cultivation. The English in India seem to have taken a dislike to the pine-apple, and imagine, that it is always a very inferior fruit to what is reared in Europe, and no doubt those raised by the natives are usually indifferent; but a very little pains indeed in every part of India, produces much finer pine-apples than those that I have seen in England.

The common cucumber No. 5, the common melon No. 7, and the water melon, No. 8, are raised in great quantities on the sandy banks of rivers. In January the field is ploughed two or three times; at every three feet a few seeds are planted in a little pit, and are kept clear of weeds. One acre of land produces about 16 or 18 rupees worth of fruit. The cucumbers and water melons are tolerably good. The melons are insipid. The musk melon is not known to the natives of this district.

I did not see the Pala Sosa, which grows in gardens during the rainy season, and is supported on a stage of bamboo; the cultivation of course is carried to no great extent. The mulberry is small and black, and is a very poor fruit.

Many additions have been made to this list in the gardens of Europeans. The Chinese peach and pear thrive very well, and produce good fruit. The Lauquat (*Mespillus japonica*), Litchi (*Euphoria*), and Wampi (*Cookia punctata*) all produce fruits that are tolerable. A plum (*Prunus*) has been introduced from Rongpoor, but does not thrive so well as at that place. The fruit of it is beautiful; but, except as bringing to recollection those of Europe, is very indifferent. The Advocato pear (*Laurus Persea*) is growing with great vigour in the magistrate's garden; but has not yet produced fruit. It is probable, that in a climate so favourable to vegetation the whole of these will soon become common in the district, like the custard apple and Guyava; but without more care, than the natives are likely to bestow, they will probably degenerate, and become altogether vile.

Flower gardens are equally neglected, and I saw nothing that deserved the name. In their yards however, even the lower classes have often some pretty flowers, and many of the villages are surrounded by fine flowering trees and shrubs. Besides the trees which have already been mentioned, I shall

give a list of the following shrubs and plants, that are cultivated round the houses as ornaments.

1. Joba, *Hibiscus Rosa sinensis*; 2. Opurajita, *Clitorea ternatea*; 3. Korovir, *Nerium Odorum*; 4. Mollika, Bel, *Jasminum Sambac* W.; 5. Kastho Mollika; 6 Juti, Jungyi, *Jasminum auriculatum* W.; 7. Jati, *Jasminum grandiflorum*; 8. Seyuti, *Rosa Moschata* E. M.; 9. Rojonigondha, *Polianthes tuberosa*; 10. Kundo, *Jasminum pubescens* W.; 11. Torulota, *Ipomea quamoclit*; 12. Krishnochura, *Cæsalpina pulcherrima* W.; 13. Togor, *Nerium coronarium* W. which is a *Taberæ montana*; 14. Podmo Togor, *Idem flore pleno*; 15. Golap, *Rosa*; 16. Chrondro Mollika, *Chrysanthemum indicum*; 17. Genda, *Tagetes erecta*; 18. Suryomoni; 19. Boro Suryomoni; 20. Otosi, *Crotolariæ retusæ varietas* W. probably a different species; 21. Madhobilota, *Gærtneria racemosa* W.; 22. Krishnokoli, Sondhyamoni, *Mirabilis Jalapa*; 23. Konggon, *Ixora coccina* W.; 24. Bhumi Chompok, *Kampferia*; 25. Dimukhi, Dopati, *Impatiens Balsamina*; 26. Doso Bahuchondi, *Moræa chinensis* W.; 27. Morga, Joladhari, *Celosia*; 28. Sweet Morga, *Celosia*.

The characters given by Willdenow and in the Encyclopédie of the kinds of Celosia called *Cristata, comosa* and *coccinea* are insufficient to enable me to refer these plants to the species described in these botanical systems, the account of all plants common in the gardens of Europe being usually very imperfect.

29. Dapidhupi, *Amaryllis latifolia* W. In gardens also a few plants are cultivated for medicine. The most common is the cress, *Lepidium sativum* called Halim by the natives.

Next to that is the Voch or *Calamus, aromaticus* of the shops. One plant of this, and another of the *Amaryllis* generally stand near a well, and daily receive a supply of water from those who frequent it. The Kelejira is very seldom found in this country, but in other districts is an object of considerable importance.

Plants cultivated for producing thread and cordage.—In this district the class of plants that occupy the next greatest extent of cultivated land, are those employed to make cordage or thread. In the distribution of the cultivated lands (table 4), I have supposed, that 80,000 bigahs are employed for these. Of this extent I suppose the following may be about the disposition.

1. Pat, *Corchorus capsularis* W. 40,000 bigahs; 2. Cotton, 25,000 bigahs; 3. Son, *Crotolaria juncea*, 14,000 bigahs; 4. Kankhura, *Urtica nivea* W. 1,000 bigahs.

The Pat is called *Gania* by Rumphius, from some native

name of this plant, and from the same source is derived our word Gung, which is applied to the coarse sackcloth, that is prepared from the fibres of its stem. In this district large quantities of this cloth (Tat or Choti) are made, as will hereafter be described; and many of the poorer people are clothed with a coarse linen (Megili) prepared from the same material. Of this also all the cordage employed in agriculture and for rigging boats is formed, and it is the material of which all the paper is made, so that it must be considered as an article of great importance. It will grow on all land, whether of a free or clay soil, that can produce summer-rice, so that its cultivation may be easily extended to any length, and it is probable, that it might be employed to advantage in many of our manufactures at home, especially in making paper, as the quantity of flax now used there is so small, that linen rags cannot be procured without great difficulty. The bags made of sackcloth, which are sent home in packages, are now I believe, employed for that purpose, but the quantity might perhaps be very much increased by using Megili for wrappers in bale goods, in place of cotton cloth. The Megili is much cheaper, would be equally fit for the purpose, and perhaps would be more saleable. Whether or not this plant might be employed in Europe to make cordage or canvas I cannot say; but I hope, that no circumstance will divert the attention of the public, until a fair trial has been made with the Son, which I have no doubt will be found to answer just as well as European hemp.

The Pat is cultivated as follows. From about the 10th of February until the 12th of April the field is ploughed. If the soil is free, it receives three or four double ploughings; if it is stiff clay, it requires five or six. The seed, in the course of the following month, is sown broadcast, and covered with a ploughing, and the field is smoothed with the Moyi. Where the soil is free, weeds must be removed twice with a spud. In the stiff soil that is not required, so that in the two soils the trouble is nearly the same. The plant is fit for cutting between the 14th of August and the 14th of September, but the seed is not then ripe, and some plants must be preserved to bring it to maturity. The plant, when fit for cutting is from five to six feet high. After it has been cut close by the root, it is put in water, covered with a little dung, and held down by a frame of bamboos. It remains

about 10 days in the water, when the fibres are so completely separated, that they are taken up in handfuls, and by mere washing, are reduced to a substance like hemp. The fibres are then tied up into bundles, which are hung over bamboos to dry, and are then fit for sale, and weigh about 30 ounces avoirdupois. A bigah of 87 large cubits, which is nearly half an acre, produces from 100 to 120 bundles. According to two statements, which I received, the medium produce may be three Calcutta *mans* from the bigah, or about 480 lbs. from the acre; but there is reason to think, that by these statements the produce is diminished, and is in fact considerably more; for the usual rate, at which the farmer sells, is 14 anas for the heavy *man*, of 96 s. w. the ser, so that his large bigah would only produce the value of 2 rupees 3 anas, or a Calcutta bigah 1 rupee 7 anas 4 pice, which is too small an allowance by at least one-half. I am indeed credibly informed, that the usual produce at Calcutta is about 740 lbs. the acre, and the fields here at least equally productive. The harvest price here is at the rate of rather more than 12½ anas the 100 weight. After the Pat has been removed, the field, where the soil and elevation are fit, gives a winter crop of rice or of mustard seed (Sorisha). The greater part is cultivated by those who use or manufacture it; for almost all the low Hindu farmers weave cloth of this material, and every farmer requires some for the use of his farm. About a fourth part is sold for exportation. The average value of the whole, according to the statements which I procured, may be about 58,000 rs.; but, if am right in supposing the land to be as productive as at Calcutta, of which I have no doubt, the value of the Pat, raised in this district, will be about 87,000 rs. even at the harvest price.

The cotton I have stated to occupy 25,000 bigahs. A little, as I have already mentioned, is raised in the northern divisions along with turmerick; but it is of a very bad quality, and the quantity is inconsiderable. In some few places a small quantity of this bad kind of cotton, which is sown in the beginning of the rainy season, is cultivated by itself in spots, that produce as much as the farmer's wife can spin for family use. The field, which is of a light soil, and situated high, is ploughed with the first rains of spring. It is then manured with a little dung, and smoothed with the Moyi.

In the end of May the seed is sown broadcast, is covered with the plough, and the field is again smoothed. It requires two or three weedings. The cotton is collected between the middle of August and the middle of October. This is a miserable kind of cultivation, which should give way to that of which I am now to treat, and in which the cotton is sown in the end of the rainy season.

This kind of cotton is raised in the south-east parts of the district, and is finer than that which is imported from the west of India. It is therefore an article of cultivation, that merits encouragement. It is cultivated on the best and highest land, both of a stiff and free soil, and is generally mixed with Sorisha, and often with Rayi flax and safflower. In the stiff soil the cotton is most productive, in the loose soil the value of the other crops increases. I shall first give an account of the manner in which it is managed in a loose soil.

The land is of the first quality, and is cultivated in a succession of crops as follows: 16 months sugar-cane, seven months summer rice, nine months cotton and mustard (Sorisha) 4 months pulse (Thakuri), in all three years. The same succession is then repeated. Some variations occasionally take place, but this is the most common. The Sorisha is sometimes left out, and the pulse is sown among the growing cotton, when it receives the last weeding. In this case the crop of cotton is more productive. The rice is cut between the middle of August, and the middle of September, and the field is immediately ploughed, until it is very well broken on the surface, which may require six double ploughings, and after about one-half of these has been given it is manured with a little dung, and with mud from ponds or ditches. Between the middle of October and that of November the seed is sown broadcast, 20 measures of cotton and one of mustard, and the field is smoothed with the Moyi, which covers the seed. That of the cotton, before it is sown, is put in water for three-quarters of an hour, and is then rubbed with some dry earth, so that the grains may separate when they are sown broadcast. A month afterwards the field is weeded. In the end of January or beginning of February the mustard is ripe, and is plucked, and at the same time the field is weeded. Between the 12th of April

and 12th of June the cotton is collected, as it ripens. The produce of a large bigah of land, nearly equal to half an acre, may be stated at 75 sers, Calcutta weight of cotton in the seed, in which state it is always sold by the farmer. Its value at harvest is 5 rs. or about 30½ lbs. for the rupee. The mustard seed produced on the bigah is about 75 sers worth 1½ rupee. The produce of an acre is therefore about 300 lbs. of cotton, worth 10 rs., and as much mustard seed, worth 3 rs.

From the preceding account it will appear evident, that the profit to be derived from each article cannot be ascertained; neither could I even ascertain the profits which a farmer may have on a bigah of land cultivated in this succession; because no man has a whole farm of such land; but each man, for every plough he has, cultivates from one to three bigahs of it, and also from 12 to 14 bigahs of poorer kinds, on which even a great variety of produce is raised.

A still greater quantity of cotton is reared on the stiff clay land. This cultivation is confined to the east side of the Punabhoba, and southern part of the district, but might no doubt be extended to the northern and western parts with the greatest advantage. It is high land, generally near tanks, which are indeed very numerous, wherever the soil is of this kind. If the soil is rich, it gives a summer crop of rice in the same year, or at least produces the seedling rice, that is to be transplanted. In the beginning of October the field is ploughed, and in the end of the month, the cotton seed is sown, mingled with Sorisha or Tora (mustard and radish), and some rows of flax and safflower are generally intermixed. In the end of January or beginning of February the oil-seeds are plucked, the field is hoed, and manured with cow-dung, ashes, mud from tanks, and oil-cake. It is then watered once in from 8 to 12 days, when there is no rain; and four men in a day will water fully an acre. The cotton is gathered between the middle of April and the middle of June, and its produce may be from 360 to 500 lbs. an acre, but the value of the oil-seeds is very small, and does not exceed 1 rupee.

The value of the whole cotton produced in the district may be about 100,000 rs. The Son is an article of the utmost consequence, as likely to be able to supply our shipping

with an excellent material for both sails and cordage. In this district the Company have made some advances to encourage the cultivation, which is therefore on the increase; for among the natives its use was entirely confined to making fishing nets. It requires a rich free soil, tolerably high, and no part seems to be better calculated for it than the whole banks of the Atrayi river within this district. Formerly much sugar-cane was raised there, and the vast profit, which arises from the cultivation of that article, must prevent anything else from being sown, where it will thrive; but since the diminution that has taken place in the waters of this river, which has been already mentioned, the soil has become less fit for sugar-cane, and seems now to be in an excellent state for the cultivation of the Son. I conjecture, that at present about 14,000 bigahs are employed in that way; but probably 100,000 might be found in the district, on which nothing could be cultivated to so much advantage, should there be a demand for the article at the price now advanced by the Company, with which the people seem perfectly satisfied. Owing to the use, to which alone this plant was formerly applied, its cultivation was entirely carried on by fishermen, who hired the ground from the farmers at a high rent, and generally received it ploughed, and fit for sowing; and this practice still continues. The field receives four or five double ploughings between the middle of September and the middle of October, and after each is smoothed. The seed is sown in the end of October, and covered with the Moyi. It grows without farther trouble, and is pulled by the root in March, when the seed is ripe. It is then steeped in water, and the principal art in the whole business seems to be to ascertain the proper time which it should remain in the water. Of this the natives can only judge by practice; and it is therefore of the utmost importance, that none should be employed to raise this plant, except those who have had proper experience, or at least that experienced persons should superintend the watering. An intelligent fisherman gave me the following account of his process. He forms the Son into bundles or sheaves of about two feet in circumference. These he places on their roots in water; which is one foot deep. In this the sheaves stand for five or six days. They are then laid on their sides, so as to be entirely under water, and are

covered with straw and earth to prevent them from floating. In this situation they also remain five or six days. The roots are then cut off, with all the part that was under water, when the sheaves stood upright; and each sheaf is then taken by the root end, and washed by shaking it in the water. In this operation most of the stems fall out; the remainder is separated by the hand. The fibres are then dried; and afterwards are washed by dipping them in water, and beating them against a plank. The washed fibres are then dried, and are fit for sale. He says, that he receives 1 rupee for 22½ sers Calcutta weight, which is at the rate of rather more than 1¾ a *man*. The Company's agent makes advances to petty dealers, who of course must have a profit, and I understood that it is very considerable. It was said, that these dealers receive the Son from the cultivators at the rate of 30 light sers for the rupee, and deliver it to the Company at from 20 to 25 sers.

The fisherman above mentioned said, that he paid from 2½ to 2 rs. a bigah for the land, and that the farmer was at the whole expense of cultivation. The produce, he says, is from 3 light *mans* to 2½ from the bigah, or from 4 rupees to 3 rupees 5 *anas* and 4 pice. His profit is from 1 rupee 8 *anas* to 1 rupee 5 *anas* 4 pice, and he can steep and clean the produce of a bigah in 15 days. I am inclined to think, however, that he under-rated the produce, as might indeed be naturally expected. Another statement gave 5½ rs. for the Calcutta bigah, which is only a small value for rich land; but the expense of cultivation is almost nothing. We may take the highest statement of the fisherman as the average produce, giving 56,000 rs. for the whole raised in the district, as coming from the farmer. The crop is exhausting, and cannot be sown oftener, on the same ground, than once in three years. The material, in the state it comes from the cultivator, is very unfit for exportation, and is combed at the factory, an operation with which the natives were totally unacquainted.

The Kankhura I have already mentioned (page 71) as a pot-herb, that is a good deal used in this district. As it is employed for the ropes used in tracking boats, it is probably the strongest material that can be procured.

Plants cultivated on account of their Saccharine juice.—In India several plants are cultivated in order to procure a Sac-

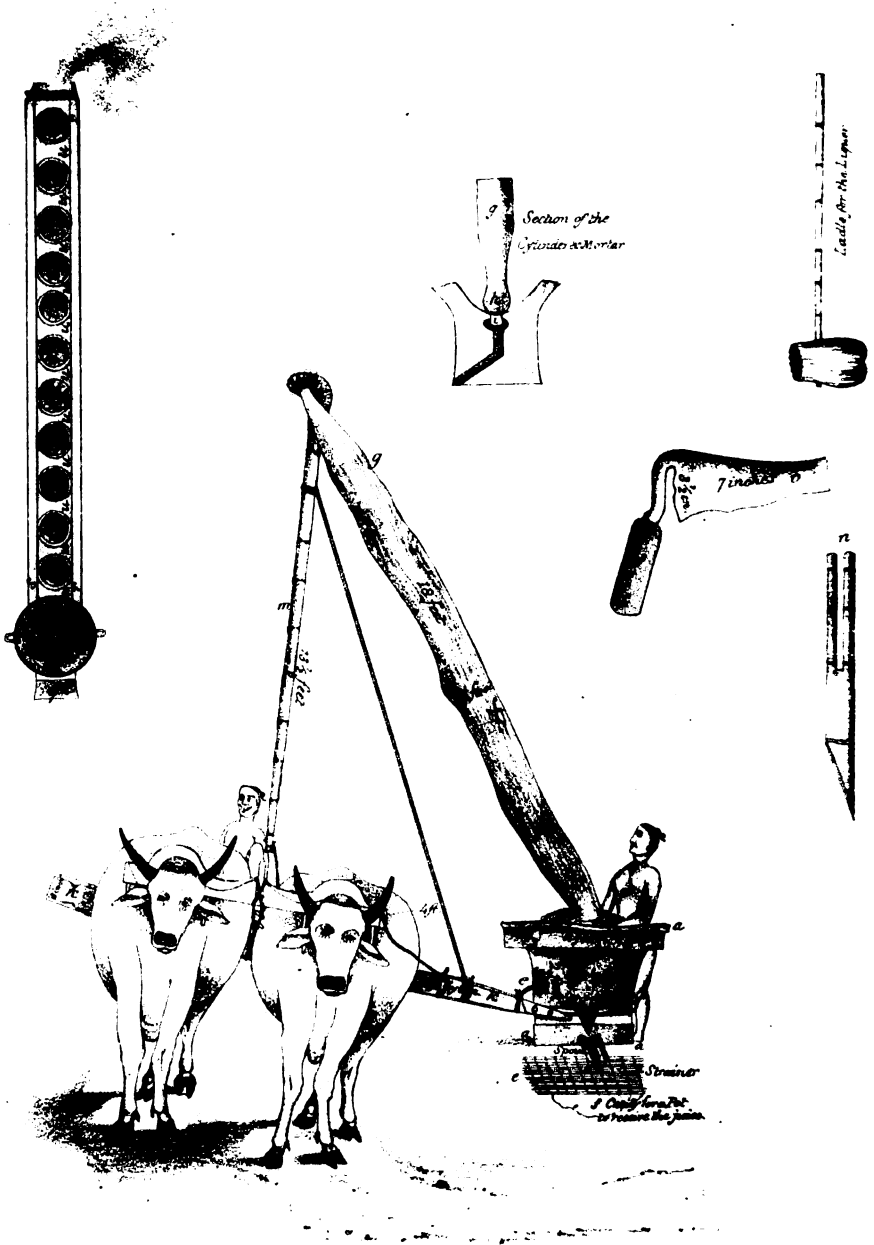
charine matter from their inspissated juice, and are almost always articles of considerable importance. In this district several of these plants grow; but sugar-cane is the only one used. This, however, is cultivated with great success; and, although I have stated the extent of land occupied by it as small, yet the value of the produce is great, and perhaps exceeds that of any single article raised in the fields of this district, rice and mustard seed excepted. On an average, the produce of a Calcutta bigah, or one-third of an acre, may be taken at 12 *mans* of inspissated juice, or about 26 cwt. the acre; and one-quarter more may be allowed for the richer soils, and one-quarter less for the poorer. The value varies very much; in some years, as the present, it falls to $1\frac{1}{4}$ rupee a *man;* in others, as the last, it rises to $2\frac{1}{4}$; but the average may be $1\frac{1}{2}$ a *man,* or a little more than 2 rs. a cwt. The usual value of the whole annual produce, as coming from the farmer, may therefore be estimated at 450,000 rs.

Sugar-cane requires a rich, free soil, sufficiently elevated to be entirely exempt from inundation, but not so high as to be deprived of moisture, or as to encourage the production of white ants (Termes). Of such land there is in this district a considerable extent, and a great part of it is now cultivated with this valuable article; for it must be observed, that in a proper system of agriculture the same field produces only one crop of sugar in three years; so that the 25,000 bigahs, stated as sugar-cane land, supposes that there are 75,000 bigahs, which are employed in the rotation; but it is only reckoned as sugar land in the year when the cane is cut; for in the two remaining years it gives other crops. It is probably owing to the selection of a soil so admirably fitted for the plant, that the produce is so high; for there is little to be commended in the manner of cultivation. I do not think, while the cultivation is confined to such a soil, that it could be much extended, in the present state of the country, although much land formerly cultivated for sugar-cane is now applied to other purposes, or is waste; but this is chiefly owing to the drying up of the rivers, which has encouraged the breed of hurtful insects. Neither can it be considered as advisable to extend the cultivation to less profitable soils, with a view to speculation in foreign markets, which are already overloaded.

In my account of the cultivation of cotton, I have already

given one of the best systems of rotation that is employed on this admirable soil, especially in the south, near the Jomuna; but there are some others, which require to be mentioned. In some parts, especially towards the north, near the Tanggon, the rotation occupies 4 years; sugar 17 months, rice 7; mustard, pulse, or wheat, 5; rice 7; mustard, pulse, or wheat, 5; rice 7; in all, 48 months. The reason of this seems to be, that the soil near the Tanggon is poorer than that near the Jomuna; the average produce there being about 9 *mans* the bigah, whereas on much good land in the southern parts of the district 15 *mans* may be taken as the average produce, and 12 *mans* as that of ordinary land. Towards the Kulik, the produce equals, at least, that on the Jomuna. In other places the rotation is 17 months sugar-cane, 7 months rice, 5 months mustard and lentils, or mustard alone, and 7 months rice; in all, 36 months. Some, again, who are necessitous, take a crop of cane every two years, with rice, tobacco, or pulse, in the 8 months of interval between the crops; but this exhausts the ground. In every part of the country it is usual to plant a hedge of Oror round the field of cane.

There are two kinds of sugar-cane, the Khagra and Kajoli. The former is a yellow hard cane, not thicker than the finger, and is only used by a few farmers in the northern parts, who are too lazy to cultivate the Kajoli, which requires some more trouble. The Kajoli has a tolerably thick stem, deeply stained with purple, and often grows 12 and 14 feet high. I shall give the full account of its cultivation.

The field, from about the middle of October until about the 10th of January, receives 10 or 12 double ploughings, and after each is smoothed with the Moyi. During the last three months of this time it is manured with cow-dung, and mud from ponds or ditches. On this account, the land fit for sugar-cane is generally divided into fields by wide ditches, into which much mud is washed by the rain, and is again thrown on the fields, when the country dries, and leaves it enriched by innumerable aquatic vegetables and animals, that have died as the water left them. When the ploughing has been completed, the field is manured with ashes and oil-cake. In February and March the field is planted with cuttings of about a foot in length, which are taken from the tops of the ripe canes that are cutting at that season. Trenches about

Sugar Mill and Apparatus.

London 1838 W. H. Allen & Co. 7 Leadenhall Street

4 inches deep, and a foot distant from each other, are made by the hoe throughout the field, the cuttings are laid horizontally in the trenches, and are immediately covered by the hand. The field is then smoothed with the Moyi. In about a month the young plants are two or three inches high. The earth is then raised from the cuttings by means of a spud, and the dry leaves by which they are surrounded are removed. For a day or two they remain exposed to the air, and are then manured with ashes and oil-cake, and covered with earth. Weeds must be removed as they spring; and when the plants are about a cubit and a half high, the field must be ploughed. When they have grown a cubit higher, which is between the 13th of June and 14th of January, they are tied together in bundles of three or four, by wrapping them round with their own leaves. This is done partly to prevent them from being laid down by the wind, and partly to prevent them from being eaten by jackals. During the next month three or four of these bunches are tied together; and about the end of September, when the canes grow rank, they are supported by bamboo stakes driven in the ground. They are cut between the middle of December and the end of March.

The Khagra is cultivated nearly in the same manner, but does not require to be bound with leaves, as it is too hard for the jackals, and does not grow so rank as to be in danger from the wind. On the same extent of ground it produces about one-fourth part less of extract than the Kajoli does.

It is only large farmers that cut an acre of cane in a year, one mill, therefore, and one set of the implements used in inspissating the juice, although very rude and simple, serve for several farms, and generally belong to some wealthy man, who lets them out for hire to his poorer neighbours, and the whole unite to clear each others fields by turns; so that, although many people and cattle are employed at one of these miserable set of works, very few indeed are hired and the greater part of the labour is performed by the common stock of the farm.

The juice of the sugar cane is always inspissated before it is sold by the farmers, I shall now, therefore, give an account of the process. Sixteen men and 20 oxen assemble from the neighbourhood, and during the crop season continue to work night and day. Two oxen are required for the mill at once,

but are relieved ten times a day. One man skilled in the operation is generally furnished by the owner of the works, and is usually the only person that is hired for the occasion. The canes freed from the leaves are brought to the works by each farmer in his turn. Some of the workmen cut them into pieces from an inch to half an inch long; others put these into the mill, and clear it of such as have been squeezed; another drives the oxen; another carries the pots of juice to the boilers; and others attend the fire. The boilers and mill will be described in the account of the implements of husbandry. The juice is passed through a number of boilers, until it is sufficiently inspissated, which, so far as I can learn, is when it has been reduced to one-fourth part, and nothing is either added or taken from it, nor is it even scummed; and in fact it contains many impurities. The inspissated juice, or extract of sugar-cane, is called by the natives Gur, and is of two kinds, which among the natives are called by various names; but concerning these there is so much confusion, that I shall call the one cake extract and the other pot extract, which term I prefer to the word Jagory, commonly used by the English, as several substances of a very different nature are included under that name. The cake extract is more completely inspissated, so that when cool, it becomes hard. An oblong square hole from 12 to 18 inches long, and from 12 to 9 inches wide, is dug in the earth, a bag of coarse sackcloth is placed in it, and the inspissated juice is poured into the bag, when the extract has cooled, the bag is pulled from the earth, and the cake is shaken out. This is a black disgusting mass weighing about 40 lbs., but not so bad as the other, which is less inspissated, and is poured into earthern pots, which hold from one *man* and a-half to one Calcutta *man* by weight, or from about 124 to 82 lbs. It is of the consistence of a thin extract, or of the inspissated liquor that comes from the cooler, and is put into the hogsheads in a curing-house of Jamaica. The natives are very fond of both kinds mixed with milk in all its forms, or with grain prepared with various kinds of sweetmeats, all very disgusting to the eye. The pot extract is not so easily transported by water, and spoils in the first rainy season, which seem to be the reasons, why a considerable quantity of the cake extract is made; for the pot extract is thought best for

eating, as being less liable to be adulterated with clay, a practice common in making the other kind; and it is preferred by those who make sugar, as being most fit for their purpose. The cake extract keeps tolerably well for 18 months, stows easily in a boat, and cannot be so readily embezzled, as any portion removed from a cake would be instantly detected in delivery. A great part of the extract, which is made in the northern parts of the district, where there are no manufactures of sugar, is therefore formed into cakes, while the sugar boilers of the southern divisions require almost all, that is made there, to be of the pot kind.

A bigah or one-third of an acre of good land in the southern districts is reckoned by the farmers to produce 168 *mans* or 13,891 lbs. of cane, and 14 *mans* or 1,159 lbs. of pot extract. Its produce of cake extract is about 11 *mans* 24 sers, or 952 lbs. The value of the pot extract, at 1½ rupee a *man*, is 21 rs. the bigah; of the cake extract, at 1¼ rupee for 40 sers of 58 s. w. the value is 20 rs. the bigah.

The leaves, that were employed to tie up the stems, serve for fuel to boil the juice. When the canes are cut, the fresh leaves, and the squeezed canes, are given to the cattle employed at the mill. In the northern parts the culture is not so well understood. The farmers there informed me, after reducing their weights and measures to the Calcutta standard that a bigah produced only nine *mans* of cake extract. The management of the plant differs somewhat. The cuttings are placed in furrows not quite a cubit from each other, and are covered by ridges, which are formed by drawing a furrow on each side of the row. The shoots, before they are planted, are sometimes soaked in water, until the eyes begin to grow. When a foot high, the plants are freed from weeds. About the end of April the field is ploughed, and in the end of May the ridges are levelled with the hoe. The field is then ploughed five times. About the end of June the canes are three feet high, and are tied together. The mill requires only 12 oxen and 8 men, but works only from about half after six in the morning, until about seven at night. It clears about half an acre of cane in 12 days. In the northern parts of the district, the fields are not manured with the earth from ditches, which will account perhaps for

their being less productive, and the rents are very low, which will perhaps account for the neglect of manure.

On considering that the sugar-cane is only a portion of the rotation of crops taken from a field, and that this forms only a part of a farm, the whole wrought at a common expense by a common stock, it will appear difficult, if not altogether impossible to state the expense of cultivation or profits, which accrue to the farmer; but these must be very considerable. The expense of cultivating sugar is however considerably more, than that of cultivating grain, and wherever sugar is reared, the rent is high. In some parts this is laid on openly; and the same field, which when cultivated with grain pays one rupee, pays five when cultivated with sugar. In most places, however, this circumstance cannot be ascertained; for the rent of the whole higher land of a light free soil is raised, and the tenant may cultivate whatever he pleases. But, as the rent is made high in proportion to the quantity of sugar-land in the district, each farmer must receive his proportion, and he could not pay this rent, should he neglect this valuable article. In such districts the whole land of this nature often rents for 2 rs. a Calcutta bigah, and more than 1 bigah out of 10 is probably not cut in the year. On the whole, farmers in districts where sugar-cane is cultivated, are by no means richer, than where grain is the only produce.

Plants cultivated for being chewed or smoked.—In every part of India chewing and smoking various vegetable substances, some of them highly intoxicating, is a favourite article of luxury. In this district the people however are less than usually addicted to these practices, and raise only some of the articles that are commonly employed.

The articles used for smoking, that are cultivated in this district, are tobacco and hemp (Gangja). The articles for being chewed, that are produced in this district, are:—Pan, *Piper* betle. Tobacco, *Nicotania.* Khoyer, *Mimosa Catechu.* Dhoniya. *Coriandrum sativum.* Joyaino, *Ammi*, an *Athamantha chinensis.* Mauri, *Anethum graveolens.*

Of the four last an account has already been given. The Khoyer raised at Maldeh is not sufficient for the demand of the district; but most of it is sent to Moorshedabad from

whence again almost the whole of this district is supplied. The three last articles are carminative seeds, of which little is used, and that is raised in the country. Of the three remaining articles tobacco occupies by far the greatest extent, and the betle-leaf is by far the most valuable. The tobacco raised in the country is not adequate for its supply, and most of the gangja is exported.

The tobacco may occupy about 1,500 bigahs. It requires a light soil, but is cultivated in three different situations. First. In rich spots of land immediately contiguous to the farmer's house, which are cultivated with this plant alone, and receive a great quantity of manure. Secondly, in rich high land fit for sugar-cane, and often as a crop alternating with that valuable plant. Thirdly, on banks of rivers, that are inundated in the rainy season. On the first of these it is most productive, and on the last the crop is most scanty. In good land it may produce eight *mans* Calcutta bigah; but, except on the rich ground that is reserved for this alone, the average cannot be reckoned at more than 4 *mans*, or 328½lbs. from one-third of an acre. It sells usually by the farmers at 1¼ rupee the Calcutta *man*, or at very near 1 rupee 11 anas 4 pice a cwt. It is of a worse quality than that of Rongpoor. In the last half of September and first half of October the field is ploughed remarkably well, and strongly manured. The young plants, that have been sown in a bed in the end of August, are then planted at one cubit's distance from each other, and watered for three days. Weeds must be removed, whenever they arise. When the plant has seven or eight leaves, the young central shoot is pinched away. It is fit for cutting in March and April. Each stem contains from five to eight leaves, which in good soil are 18 inches long, and in a poor are only half that length. The stem is cut, and the plants are allowed to be three days on the ground. The leaves are then separated, and are tied in handfuls, which are hung in the open air until dry. The handfuls are made into bales, by laying them together in two rows with their roots outwards. The parcels are surrounded with straw, are tied very tight, and the bale is then complete.

The Betle-leaf may occupy 700 bigahs, but its value is very considerable, although the accounts which I received on this subject vary so much that I cannot depend on any of

them. The plant is cultivated in what is called a Voroj, which signifies a fort, and great pains are bestowed to defend it from the sun and wind. The proper cultivators form one of the nine tribes of tradesmen that were admitted to be pure by Bollalsen, which shows the importance that was then attached to this plant; but the Muhammedan invasion has introduced considerable disorder, and those who cultivate it now are of many different castes, and it is reared even by Muhammedans. They are, however, the richest cultivators in the district, although half a bigah, or one rood, may be considered as a decent garden or fort. I shall therefore detail the manner in which such a one is managed.

From the middle of October until the 10th of February the garden is repeatedly hoed and smoothed with the Moyi, which costs three rupees. Then two ridges are formed with the hoe, each about one foot wide, and between them is a little channel six inches wide. At every four feet throughout the garden similar ridges are formed. Then in the middle of every interval is made a ridge, which on each side, between it and the adjacent double ridges, has a flat space of about 18 inches wide, on which the people walk when they clean the garden, or gather the leaves. In the double ridges are placed rows of sticks about six cubits long, of which four and four are tied together by the middle. To the tops of these are fastened parallel rows of split bamboos, which are crossed at right angles by others so as to form a net work. On this are laid two or three rows of the stems of a reed called Uluckhor, and these are tied to the bamboos. The sides of the garden are secured in the same manner, and only a small door is left for the workmen to enter. Then cuttings of the betle-vine are planted in two rows on each of the ridges. The operation costs for forming the ridges 3 rs., for bamboos, sticks, reeds, and rope, 12 rs., and for workmen, 4 rupees. During the latter half of April and first half of May the garden must be watered by pots, which costs two rupees. The water is given once every five or six days, and is poured into the channels between the ridges. Between the middle of August and the middle of September the garden must be manured with fresh earth and oil-cake, and this must be repeated once a month for four times. At the first time a strong reed (Ikiri) or bamboo is stuck into the

ground near each vine, which climbs upon this supporter. These operations cost 19 rupees. In the end of March the garden must be completely weeded, which costs 4 rupees. The rent for one year and a half is 1 rupee. The total expense is therefore 48 rs., besides the maintenance of the cultivator's family, which cannot be estimated at less than 5 rs. a month, or 120 rupees. The total stock necessary before the garden becomes productive is therefore 168 rupees. A garden lasts from 12 to 30 years, according to which the interest of the stock must be calculated, and 18 per cent. ought at least to be allowed; say 15 rupees. Then the annual expense will be:—

Interest of capital, 15 rs.; repairing the walls and roof, 8 rs.; watering in the heats of spring, 2 rs.; manuring, 10 rs.; weeding, 2 rs.; rent, 10 anas; collecting the leaves, 36 rs.; total, 73 rs. 10 anas.

This may be about one-half of the produce, but I have already said I cannot speak with any confidence on this subject. It is certain, however, that no land in Bengal gives any return nearly equal to that cultivated with betel leaf. The situation in general chosen is the sloping side of a tank, where the soil is commonly a stiff clay. A capital of 168 rs. being very rarely employed in agriculture by Bengal farmers, the trade is not likely to be overstocked.

The cultivation of hemp, on account of its buds that are used for intoxication, is confined almost entirely to the division of Jogodol, where it is raised on very rich clay land, which, like that reserved for tobacco, is generally a small spot near the farmer's house, and is allowed a great quantity of measure. The whole extent may be about 300 bigahs. Its produce by the bigah may equal in quantity that of tobacco, but it is sold here at nearly five times the price, so that the returns are great, but the expense is also considerable. The natives have two proper names for the hemp (*Cannabis sativa*), and call it Gangja when young, and Siddhi when the flowers have fully expanded. It is a common weed in many parts of the district, and the wild siddhi answers for a particular manner of intoxication. The dried leaves are beaten in a mortar with water, and this infusion is drank. This is not so strong as the Gangja, nor is its intoxication attended with such violent effects; but it may be readily procured, whereas the wild plant in its young state has little effect, and in order to

procure Gangja the plant must be cultivated with great pains. The seed is sown in a small bed about the end of June. The field must be very thoroughly wrought with the plough, hoe, and Moyi. The seedlings are transplanted in August, are placed three or four feet from each other, and must be repeatedly manured and weeded. The plant grows from four to six feet high, and sends out many lateral branches. In February, when the leaves are tender, and before the flowers open, the buds and young leaves are pinched off, and spread on the ground, where they lie 10 or 12 days exposed to the dew and sun until they are dry, and fit for use. It is smoked like tobacco, and about 12 grains may be the usual dose.

Plants cultivated for dying.—The plants cultivated in the fields of this district for producing dyes are two, indigo and safflower. The last is of little or no importance, and a few drills of it are occasionally put amongst cotton, as I have already mentioned, or a small bed is sown in a garden, chiefly on account of its leaves, which are used as a green. The safflower is chiefly used at Maldeh, and the greater part is imported from other districts. The natives here do not eat the seed. In this district, therefore, indigo is the only dying plant of which the cultivation deserves notice, and unfortunately the cultivation does not seem to flourish. The extent of land may be about 15,000 Calcutta bigahs, allowing on an average about 700 for each set of works, of which there are 21 in the district. The value of the plant produced may be taken at about 37,500 rs. or two and a half rs. for a Calcutta bigah. This is therefore an object of very little importance to either farmer or landlord, and both classes of men have great objections, not only to the extension, but to the continuance of the culture. As, however, the value of the indigo manufactured is very considerable, and as it is one of the principal sources of foreign commerce which Bengal now possesses, it comes to be of importance to the country, especially as it gives employment to the poor labourers, and in the parts of the district where it is most prevalent has almost doubled their wages.

In this place I shall confine myself entirely to the cultivation of the plant, and I cannot avoid mentioning that, both on this subject, and concerning the nature and state of the manufacture, I have received much assistance from Mr.

Halliday, surgeon to the station, and from Mr. Tucker, a manufacturer of indigo. The soils chosen for indigo and the seasons for sowing it are very various, and as it is a very uncertain crop it would seem to be a desirable circumstance for every manufacturer to choose as great a variety as possible, so as to render the average less liable to variation; for if the whole indigo belonging to a set of works be sown on one kind of land, the whole may one year be entirely destroyed, so that the works may be useless; while another year the crop may be so luxuriant, and ripen so nearly at one time, that the works may be unable to manufacture one-half of the produce.

The land that is most commonly employed is high, with a sandy soil, and is in general poor, such as would be cultivated only occasionally, were it not for the indigo, unless it happened to be near the farmer's house, and was allowed much manure, in which case it would produce a variety of valuable crops. This is well ploughed, and should be manured, which however is generally too much, if not altogether neglected. The seed is sown broadcast in March, April and May; the lowest lands being sown earliest. Much pains should be bestowed on weeding indigo, but this also is in general much neglected. It is fit for cutting in four months after it has been sown, and after being cut shoots out again. Sometimes the shoots are reserved for seed, sometimes they are cut for a second crop, and sometimes the part not reserved for seed is ploughed for other purposes. The seed is ripe in February and March, so that the crop occupies the whole year. The Calcutta bigah in general may be estimated to produce 25 bundles, 6 feet in circumference, worth 2½ rs. The seed may be worth 8 anas more; but it is only some situations that answer for it, and in general little more is raised than serves to supply the farm. The cultivation cannot be considered as so laborious or expensive as that of rice, especially in the slovenly and careless manner in which it is usually conducted. The price given by the different manufacturers varies from 8 to 12 bundles (6 feet circumference) for the rupee, and the money which they advance (2rs. a large bigah or about 1¼ r. the Calcutta bigah) is always fully adequate to defray every expense that the farmer can possibly incur. The manufacturer pays the carriage to the works, when these

are not in the immediate vicinity of the field. If the rent were therefore moderate, such as this land would pay if cultivated for rice, the raising indigo weed would be abundantly profitable, as it ought indeed from its uncertainty; for too much sun, and either too much or too little rain entirely ruin the crop. The fact however is, that the landlords, either wishing to share in the profits of the manufacturer, or to prevent the cultivation altogether, usually exact a rent, which ends in the ruin of the farmer, who has been induced to receive advances.

The next most common land for indigo is the flat sandy banks of rivers, which are inundated in the rainy season, and which are very low rented and seldom occupied. The crop on this is extremely uncertain, as it is cut just about the time when the rivers begin to rise; and if these swell a little earlier than usual, it is entirely lost. This may happen probably once in three years. No seed can be procured from this land; but when not destroyed by the river, its produce is very great, and was estimated to me at 60 bundles worth 5 rs. the Calcutta bigah; the expense is very trifling. Two or three double ploughings suffice for this light soil. The seed is a principal part of the expense, and is sown in January. It should be weeded twice, but this is done in a very negligent manner. It is cut between the middle of May, and the middle of July.

The red clay lands towards the Korotoya answer well for indigo, and the high clay lands of a light-coloured soil near the Tanggon are equally favourable. The indigo on the red clay is sown after the first rains of spring have softened the ground. It is reaped between the middle of July and the middle of September. The produce on the red clay was estimated to me at 20 bundles worth 2 rs. on the Calcutta bigah, but this land is remarkably favourable for seed, and supplies the lower land, on which seed cannot be raised. The seed on red clay is often worth as much as the plant. The produce of the light-coloured clay was estimated to me at 40 bundles worth 3 rs. 5 anas 4 pice. This also is favourable for seed; but the hardness of the soil renders the cultivation expensive.

It has been attempted to sow indigo on rich low rice ground, which in the rainy season is deeply covered with water. The seed is sown about the middle of February, and the plant is

cut in June, after which there is abundance of time for the rice crop, and I believe that this will be found to be rather improved by the indigo, which does not exhaust the land. The crop of indigo is however, both uncertain and small. Mr. Tucker who has tried it, estimates it at 25 bundles worth 2½ rs. for a large bigah, which is at the rate of between 16 and 17 bundles for the bigah of Calcutta.

This gentleman has also sown indigo seed among cotton, which is done at the last weeding, that the cotton receives about the end of April, and requires no additional expense of cultivation. The stems of the cotton are pulled after all the seed is ripe, and the indigo is cut about the 1st of August. Mr. Tucker estimates the produce of this to be about 20 bundles or 2 rs. the Calcutta bigah. This cultivation will I am persuaded be very valuable, both in clay lands where nothing is raised after the cotton, and in the free soil where only a miserable crop of pulse is procured between the cotton and sugar, and which is not more in value than one-fourth of the indigo. The people are however, afraid to venture, lest their most valuable crop the sugar should be spoiled; and it is natural that they should be so, until convinced of the contrary by experience. On the clay soils the cotton ground is often that which is applied to raise the seedlings for transplanted rice, and where that is the custom, it will prevent indigo from being raised.

In fact I am persuaded, that indigo in one way or other may be raised on most soils, and it would be of great importance to the manufacturer to have the whole compact near his works, to have a lease of the whole from the landlord, and to let it out again to the farmers. At present it is customary to have from one to three bigahs from each farmer, and these plots are scattered over a district of perhaps five or six miles in diameter, owing to which great losses arise from fraud, notwithstanding that a great expense is incurred to prevent imposition.

Plants used for feeding silk-worms.—The plants cultivated for supporting silk-worms, are those of least importance in this district, if we consider merely the extent of ground which they occupy; but they are of considerable importance, if we estimate the value of the produce, and consider that it affords

the raw material for a valuable manufacture. Two plants are cultivated; the mulberry and *Ricinus*, and these support two different kinds of worm.

The mulberry cultivated in this district is a dwarf plant, which I have had no opportunity of examining in a state fit for ascertaining its botanical affinities. Its fruit is said to be black, and very small. The cultivation is confined to the banks of the Mohanonda, where a high free soil is chosen, and to those of the lower parts of the Korotoya, where a clay soil chiefly that of a red colour, is mostly used.

On the banks of the Mohanonda, the mulberry may occupy about 4000 bigahs Calcutta measure, all within a mile of the river, amidst noble groves of Mango, Banyan and Pipol trees, which shelter the houses of those who rear the worm, and which would be delightful were it not for their slovenly condition. The plantations are surrounded by ditches and high banks of mud, that form good fences, and ought to be secured from inundation, as this entirely destroys the plant, which otherwise lasts about 20 years. The Company's Commercial Resident makes advances for a great part of the cocoons; but as these are not manufactured in this district, and as all that is manufactured on the left bank of the river is done by the farmers, who sell the raw silk, I shall proceed to give an account of the whole process. I begin with forming a new plantation of one bigah; for many do not exceed that size.

To 12 double ploughings between the 12th of June and the 15th October, at 1½ ana, 1 r. 2 anas; to making a fence of earth, 2 rs ; to planting cuttings of the mulberry at about 18 inches from each other, after having hoed the field thoroughly. This is done between the 15th of October and the 14th of November, 4 rs.; to weeding in January, 1 r.; rent from 6 to 20 anas, average, 13 anas; total, 8 rs. 15 anas. The annual expense afterwards.—Interest on the above at 18 per cent. 12 anas 10 pice; repairing the fence, 1 r.; ploughings, 1 r.; weeding, 8 anas; rent, 13 anas; collecting the leaves and pruning, 3 r. 6 anas; total, 7rs. 7 anas 10 pice.

The allowance for collecting the leaves I state on the following grounds. Many persons who rear the worms, employ people to cultivate the plantation, and these agree to deliver one-half of the produce, and to defray every expense. The 3 rs. 6 anas is the difference between the expense, and the average half the produce.

There are annually six broods of worms, and the leaves are collected at six seasons. At three of these the plants, which grow about two or three feet high, are pruned, and the prunings are fit for feeding the worm. The leaves and prunings are sold by the load which a man carries in a basket (Khunggi) that may contain about 80 lbs. weight, and according as the crop is plentiful or scarce, vary from 1 to 30 burthens for the rupee, which shows, that the crops are extremely uncertain. The average price, however, throughout the year is 4 burthens for the rupee. The usual produce at each of the different crops is stated to be—

12th March, 11th April, 8 burthens; 11th April, 12th May, 6 ditto; 13th June, 14th August, 16 ditto; 14th August, 14th September, 8 ditto; 15th October, 13th November, 12 ditto; 14th November, 13th December, 10 ditto. Total, 60 burthens, worth about 15 rupees.

The profit on such land is therefore very great, and many people content themselves with this, sell the leaves and rear no worms; but many more employ the leaves to rear their own worms, and no breeder trusts entirely to the market for a supply of leaves.

I shall now proceed to give an account of the manner in which cocoons are procured, a step of the process at which a great part of the cultivators stop. It is supposed, that a man and his family of the usual strength, that is a wife and an old woman or child capable of assisting, can cultivate, collect the leaves, and feed as many worms as can be reared on four bigahs of land.

He must in the first place build a small hut with hurdle-walls, and which has an aperture that serves for door and window. Every side except the door is surrounded by two or three rows of shelves, that support the frames lined with mats, on which the worms breed, feed and spin. The whole value of the apparatus may be 6 rs.; and that of his house may be 10 rs. allowing him to rebuild every four years, the annual expense will be 4 rs. and his ground-rent will be 1 r. The total expense therefore of his accommodation will be 5 rs. The eggs are placed on frames (Dala), where they are to be hatched and fed; and the 240 burthens produced by four bigahs of land are sufficient to feed 240 frames of worms. When full grown, the worms are removed to other frames (Chondro), where twigs are placed to facilitate their spinning.

The worms of two Dalas are placed on one Chondro, so that there are 120 Chondros, each of which should produce $2\frac{1}{2}$ sers (88 s. w.) of cocoons. The whole therefore should produce $7\frac{1}{2}$ *mans*, the usual price of which is 12 rs. the *man*, or 90 rs. from the four bigahs. Deduct the expense of cultivation at 4 rs. 1 ana 10 pice a bigah, and there will remain 73 rs. 8 anas 8 pice, deduct farther the house-rent 5 rs. and there will remain 68 rs. 8 anas 8 pice, or $5\frac{3}{4}$ rs. a month, which is a decent support for a family. Should the family keep more worms, the land would be cultivated by another person for one-half of the produce.

The people are so necessitous, that, wherever they can procure advances for the cocoons, they always sell the produce of their plantations in that state; the profit, however, by spinning the silk is not inconsiderable. The cocoons, that are intended for spinning, are exposed to a strong heat, which kills the animal. The natives have almost entirely relinquished the original Hindu manner of winding the silk from the cocoon, by the means of a small reel (Laya) about eight inches in diameter, which is fastened to a spindle, that the workmen twirls round with his hands; and a larger reel (Gayi) moved by a winch after the European fashion is generally employed. Several people in this district have huts, in which there is one or two reels, each provided with a small furnace and vessel for containing hot water, in which the cocoons are kept when winding. The instrument is let by the day to those who wish to use it. The price paid here for winding $2\frac{1}{2}$ sers (at 88 s. w.) is 1 ana for the implement, and 2 anas to two workmen that are employed, altogether 3 anas. On the $7\frac{1}{2}$ *mans* of cocoons produced by 4 bigahs of land, the expense of winding will be $22\frac{1}{2}$ rs. Every $2\frac{1}{2}$ sers of cocoons produce 15 s. w. of silk, altogether 1800 s. w., usually worth 180 rs. The value of the cocoons was 90 sicca rs., the expense $22\frac{1}{2}$ rs., altogether $112\frac{1}{2}$ rs., leaving 87 rs., or $33\frac{1}{2}$ per cent. for profit. At the above rates an acre of land or 3 bigahs should produce 508 lbs. of cocoons worth $67\frac{1}{2}$ rs.; 180 burthens of plant worth 45 rs. The value of the whole produce may be 60,000 rs. of leaves, 90,000 rs. of cocoons, or 150,000 rs. of silk, were it all wound in this district.

Near the Korotoya the mulberry is cultivated in both clay

and free soil, and I took the account of the cultivation in the former only. The people were uncommonly shy, and I have no great reliance on their statements. The field is surrounded by a ditch and bank of earth as at Maldeh. The seasons differ considerably, although the expense of cultivation is nearly the same. The field is ploughed between the 12th of April and 12th of June, and the fence is made at the same time. The cuttings are planted in the following month, and weeds are removed about the end of August. Every year, with the early rains in spring, the field is ploughed and manured with dung and fresh earth. The plants are pruned close to the ground about the beginning of September, and the field is then ploughed, weeded, and manured. The young shoots push forth with great vigour, and about the middle of October are three feet high. In the ensuing month the leaves of the best quality are produced. In spring the same stems shoot forth new leaves; and these are gathered between the 13th of May and the 14th of August. Those gathered in the middle of that period are reckoned of the second quality; those gathered at the beginning or end are of the worst kind. The following estimate was given of the produce of one bigah in baskets, said to contain leaves weighing 25 sers of 96 s. w. or about 63 lbs.

Leaves of the first quality baskets, 24 lbs.; ditto, second quality baskets, 24 lbs.; ditto, third quality baskets, 22 lbs. Seventy burthens weighing Calcutta *mans* 52½.

The bigah at Maldeh of free soil gave 60 *mans*, and is smaller, so that, making allowance for this, the red clay would give only about 37 Calcutta *mans* of leaves on the Calcutta bigah. The crop, however, seems to be more certain, as the price varies only from four to six bundles the rupee. The usual price is five bundles the rupee, or 14 rupees for the bigah of leaves, which is at the rate of nearly 10 rs. the Calcutta bigah, or one-third less than the produce of land at Maldeh. Ten baskets are required to feed two frames of worms; but the frames are much larger than those at Maldeh; for two frames of worms are placed into one, when they are about to spin, and this one produces 4 sers (96 s. w.) of cocoons; so that one frame on the Korotoya produces 384 s. w. of cocoons from 300 Calcutta sers of leaves, while on the Mahanonda a frame produces 220 s. w. of cocoons from 160 sers of

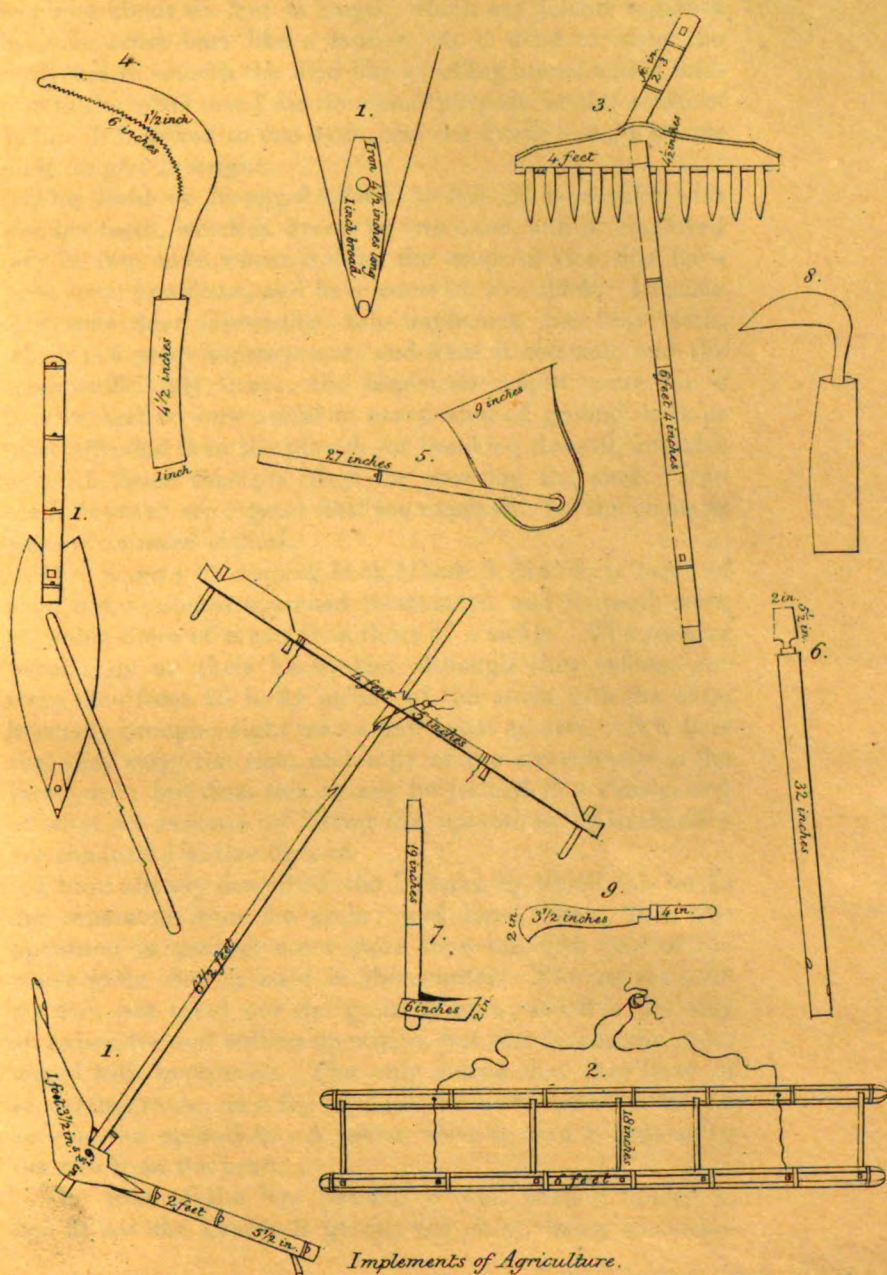
leaves. The leaves, therefore, on the banks of the Mahanonda, are not only in greater quantity, but are more nutritious than on the Korotoya; for 300 sers of them would have produced $412\frac{1}{4}$ s. w. weight of silk, or about one-fifth more than the produce near the Korotoya. The bigah produces therefore 28 sers of 96 s. w. of cocoons, which at the Calcutta weight and measure is rather more than $23\frac{1}{2}$ sers for the bigah or very little more than one-half of what was stated at Maldeh. It must, however, be observed, that the soil is of a different nature, and I had no opportunity of ascertaining what the free soils near the Korotoya can produce. It is also probable that the people underrated very much every part of the produce; for although they stated the ser of cocoons to be 96 s. w., yet there is the strongest grounds to suppose that in reality it weighs 160 s. w. I conclude this to be the case from the farmers stating that they sold their silk at 8 rs. a ser of the same weight with the ser of cocoons, and I know from the commercial Resident, that the ser of silk, which sells at 8 rs., contains 160 s. w. It is extremely probable, therefore, that the calculation requires to be corrected by taking this rate of 160 s. w. for the ser, in place of 96 s. w. as stated by the farmers. This will make the produce, reduced to the Calcutta weight and measure, about 40 sers of cocoons from the bigah, which is nearly the same with the produce at Maldeh. The cultivators state, that 28 sers of cocoons give $2\frac{10}{16}$ sers of Bengal silk worth 21 rs. The rent is 2 rs., the expense of weeding $2\frac{10}{16}$ rs., and of cultivation 5 rs., leaving a neat profit of 11 rupees 6 anas. Mr. Monkton states, that cocoons give one-eighth of their weight of silk, which would make their profit considerably greater. The cultivators say, that they have refused 13 rs. for the *man* of cocoons, at 76 s. w. the ser. The price offered is higher than that usually given at Maldeh, where the *man* of 88 s. w. the ser, sells only for 12 rs. This I have since learned was an undervalue. The Company at Maldeh gives 16 rs., and the average value of the *man* at 80 s. w. a ser is 12 rs. 7 anas. The whole value of the leaves produced near the Korotoya may be about 30,000 rs., that of the cocoons has not yet been fixed.

The *ricinus* (Erondo of the natives) is raised in many parts of this district for feeding a silk-worm, which I take to be

the *Phalæna Penelope*. There are two kinds of the plant, the *Ricinus communis* and *viridis* of Willdenow. This excellent botanist has with great propriety changed the name given by Linnæus to the first species; but with regard to the last he has been uncommonly unfortunate, as the stem of the plant is of a bright red, and the leaves are stained with brown, so that it may be considered a very remarkable exception to the vegetable colour being green. Both plants seem to answer equally well; and those who rear the worm drop a few seeds round the fence, that encloses their farm yard, or sow a small spot adjacent to their house. The seed is put in the ground about the beginning of November, and again about the beginning of May. Both plants are annuals, although they have strong woody stems often 12 feet high, and they live about eight months, so that leaves are procurable at all seasons. The seed is sometimes made into oil for medicine, but is never used for the lamp as in many parts of India. The plant requires a mixed free soil. In some places one brood only of worms is reared, in others 12 broods spin silk in the course of the year. The cocoons preserved for breeding, having produced moths, which are very beautiful, the impregnated females cling to a small twig, that is hung up near them, deposit their eggs round it in spiral rings, and then die clinging to the stick. These twigs are often sold at markets, and, with the dead moths hanging round, make a very curious appearance. A breeder having procured one of these twigs, scrapes the eggs into a piece of cloth, which he lays on a wide-mouthed basket, which is supported at some distance from the floor in one end of his hut. The eggs are soon hatched, and the worms are daily supplied with fresh leaves, and kept clean. The worm grows rapidly, and when ready to spin, some twigs are put into the basket to assist its operation. The cocoons, that are to be spun, are thrown into boiling water, and the threads of from five to six are wound into one by means of the common silk-reel of Bengal. This forms a coarse rough thread of a dirty white colour, and totally destitute of the silky lustre.

A ser of 96 sicca weight ($2\frac{464}{1000}$ lbs.) of this thread is worth from 12 anas to 1 rupee; but it is very seldom sold, and the people who keep the insect in general rear no more than is just sufficient to make clothes for their own family.

The cloth lasts very long; owing to which quality it is probable, that some use might be found for this material in our manufactures at home. It would perhaps answer as an ingredient for mixing with wool in the fabrication of many kinds of cloths, and I think it might be of use to send home a few hundred weight, which might be distributed among the principal manufacturers, in order to discover whether or not it could be applied to use. I have no doubt if advances are made, that large quantities would be procured at 12 anas for the ser, or about 5 anas for the pound. So that it might be sold at 18 or 20 pence a pound in England with a reasonable profit. At present about 100 bigahs may be occupied with the Erondo plant.

Of the implements of Agriculture.—The plough (*Plate* 8, 1,) is of the wretched construction usual in India, and has neither coulter to cut the soil nor mould-board to turn it over. In some part of the district it even wants the share, or small piece of iron, that usually strengthens the point. Such a light machine is often managed by a boy 12 or 14 years of age, and two oxen or cows are reckoned sufficient to drag it. These are most wretched creatures; and until the breed of labouring cattle is improved, or at least until the cattle are better fed, they are entirely incapable of drawing any more powerful instrument. In this district two oxen or cows and one man are kept for every plough, and usually work from about seven in the morning until noon, when the man goes to do other jobs about the farm, and the cattle are given to a boy, who drives them to pasture, if there is any, or gives them a little rice straw. The quantity cultivated by one plough in this district is pretty uniformly about five acres; but some deduction must be made where cows are employed, these cannot plough more than four acres. Although there is much more ploughing performed on five acres of a loose soil, a great part of which gives two and some even three crops in the year, than on five acres of clay which is only cultivated once, yet the difference in the quantity of the two kinds that one plough can cultivate, is very small, but then the plough is employed almost the whole year, where the soil is free; and is idle for more than six months where the soil is stiff clay. The value of a plough is usually about 12 anas, of which the iron forms a considerable part.

Implements of Agriculture.

N.º 1. Plough. _ 2. Moyi. _ 3. Nangol or Bidle _ 4. Reaping hook. _ 5. Hoe. _ 6. Khonk. _ 7. Hatchet. _ 8. Spud. _ 9. Bill. _

London. 1838. W. H. Allen & Co. 7 Leadenhall St.
J. Netherclift Lithog:

The Moyi (*Plate* 8, *No.* 2,) is an instrument made of two bamboos about six feet in length, which are joined together by some cross bars like a ladder. It is used to cover the seed, and to smooth the field like a rolling stone, and is inferior to the plank used for the same purpose in the south of India. It is yoked to two oxen, and the driver usually stands on it, to give it weight.

The Bidd or Nanggol (*Plate* 8, No. 3) is a rake with wooden teeth, which is drawn by two oxen, and is employed only in free soils, where it thins the crops of rice that have been sown broadcast, and have come up too thick. In some stiff soils near Ghoraghat this implement has iron teeth, which is a great improvement, and were it common, and the teeth sufficiently heavy, the implement might serve for a harrow, and be very useful in every kind of ground, both as more effectual than the plough for breaking the soil, and also as much fitter than the Moyi for covering the seed. Iron teeth however are a great deal too expensive for the common state of farmers' capital.

The Kastya or reaping-hook (*Plate* 8, No. 4) is made of iron, but is a most wretched instrument, and its teeth more resemble those of a saw than those of a sickle. The reapers usually set on their heels, and although they seldom cut more than from 18 to 24 inches of the straw with the ears, it usually occupies eight men a day to cut an acre. It is true that they carry the rice, and tops of the straw home to the farm yard; but from this it may be judged how slowly, and at what an expense of labour the operations of husbandry are conducted in this district.

I have already described the Dengki, by which the husks are separated from the grain; and have shown, that this operation in general costs more than one-fifth part of the whole grain that is used in the country. The natives have no flail, but tread out the grain by oxen, which is not only an expensive and tedious operation, but also leaves the grain mixed with impurities. The only means that they have of separating these, is a fan (Kula). Some baskets are necessary in the operation. A coarse sieve is used in separating the rice from the bran.

The iron of the hoe (Kodal) is well shaped (*Plate* 8, No. 5) but the handle is greatly too short, being accommo-

dated to allow the natives to sit while at work, a custom which always prevent great exertion. When sitting is not practicable the use of this implement becomes very fatiguing, as in order to reach the ground the labourer must bend himself almost double. The natives have no spade, which is a great loss, as I am persuaded, that with an instrument of that kind a man could cultivate fully as much as he does with a plough and two oxen, and the cultivation would be much more effectual, while it would save a vast deal of useless animal suffering, no creature on earth being probably so miserable as the plough ox of India. Besides the straw would support many more cows, and increase the quantity of milk, which is a very scarce article in Bengal, so that very few of the labourers can procure any part of this food so natural to man. Such an improvement, however, would imply, that the Hindus should consent to the male calves being destroyed; which would be vain to expect, and disgusting to propose. The only implement approaching to the spade, which the natives, possess, is a stake with a flat sharp point of iron, somewhat like a large chisel (Khonta), with which they dig holes for planting trees, or for fixing stakes or posts in the ground (*Plate* 8, No. 6.)

The hatchet (*Plate* 8, No. 7) must also be considered as an implement of agriculture, as no farmer can well want this useful instrument. The iron of the hatchet is a great deal too narrow, and is nearly of the shape and size of the wedge, that is used in England for cleaving wood.

The weeding iron or speed (*Plate* 8, No. 8) called in this district by a variety of names, is an instrument sufficiently fit for the purpose, and is also useful in transplanting. Its form is that, which usually prevails in every part of India.

The only other instrument of husbandry commonly used in this district is the Da, or bill for cutting bushes or bamboos (*Plate* 8, No. 9); and, although rudely formed, it is well enough adapted for the purpose.

To recapitulate then the implements proper for the cultivation of five acres of land, they are:—1 Plough, 12 a.; 1 Moyi, 1 a.; 1 Bida, 1 a.; 1 Reaping-hook, 1 a.; 1 Dengki, 8 a.; Fan sieve and baskets, 1 a.; 1 Hoe, 14 a.; 1 Weeding iron, 1 a; 1 Hatchet, 8 a.; 1 Bill, 3 a.; Ropes, 2 a. Total 3 rs. 4 anas.

There only remains for me to describe the mill and boiler

used in preparing the extract of sugar-cane, and which are usually let by the day. The mill (*Plate* 8, No. 9), is on the principle of a mortar and pestle. The pestle however does not beat the canes, but is rubbed against them, as happens in many chemical operations, and the moving force is two oxen. The mortar is generally a tamarind tree, one end of which is sunk deep in the ground to give it firmness. The part projecting *(a, a, a, a,)* may be about two feet high, and one-half foot in diameter. In the upper end of this is cut a hollow in form of the small segment of a sphere (*b b*). In the centre of this a canal (*c c*) descends a little way perpendicularly, and then obliquely to one side of the mortar, so that the juice as squeezed from the cane, runs through this canal, and by means of a spout (*d*) is thrown upon a strainer (*e*), through which it runs into an earthern pot, that stands in a hole (*f*) under the spout. The pestle (*g g*) is a tree of about 18 feet in length, and 1 foot in diameter, rounded into a foot (*h*) which rubs against the mortar, and which is secured in its place by a button (*i*), that goes into the canal of the mortar. The moving force is applied to a horizontal beam (*k k*) about 16 feet in length, which turns round the mortar, and is fastened to it by a bent bamboo (*l l*). It is suspended from the upper end of the pestle by a bamboo (*m*), which has been cut with part of the root, in which is formed a pivot, that hangs on the upper point of the pestle. The cattle are yoked to the horizontal beam at about 10 feet from the mortar, move round it in a circle, and are driven by a man, who sits on the beam to increase the weight of the rubbing power. Scarcely any machine can be more miserable, and it would be totally ineffectual, were not the cane cut into thin slices. This is an expensive part of the operation. A man sits on the ground, and has before him a bamboo stake (*n*), which is driven into the ground, and has a deep notch formed in its upper end. He passes the canes gradually through this notch, and at the same time cuts off the slices with a kind of rude chopper (*o o*).

The boiling apparatus is better contrived. The mill is without shelter, but the boilers are placed under a shed. The fire-place is a considerable cavity dug into the ground, and covered by an iron boiler (*p*). At one side of this is an opening (*q*) for throwing in fuel, and opposite to this is an open-

ing, which communicates with a horizontal chimney. This is formed by two parallel mud walls (*rr*, *ss*), about 20 feet long, 2 feet high, and 18 inches distant from each other. A row of 11 earthen boilers (*t*) is placed on these walls, and the interstices (*u*) are filled with clay, which completes the chimney, an opening (*v*) being left at the end for allowing the smoke to escape. The juice, as it comes from the mill, is first put into the earthen boiler that is most distant from the fire, and is gradually moved from one boiler to another, until it reaches the iron one, where the process is completed. The furnace is on an excellent principle, and might be adopted in many manufactures to great advantage. The execution of its parts, indeed, is very rude and imperfect. The inspissated juice that can be prepared in 24 hours by such a mill, with 16 men and 20 oxen, amounts only to 8 *mans*, of 58 s. w. the ser, or 476 lb. It is only in the southern parts of the district, where the people work night and day, that this mill is so productive. In the northern divisions the people only work in the daytime, and do not inspissate one-half so much juice.

On Manures.—This part of good husbandry is more neglected than any other by the farmers of Dinajpoor; not that they are unacquainted with the utility of manure, but they neglect the means by which it may be procured in plenty. The cattle are so scantily fed, that the manure of the cow-house is in very small quantity, and is never increased by the use of litter, although the straw of every thing, except rice, is either altogether neglected or burnt. And the same is the case with the coarser kinds and parts of even the rice straw. If all these were carefully employed as litter, and if all the leaves that could be collected were added, as is done in Canara, the quantity of manure might be very much increased; at present it is altogether trifling, and in the largest farm-yard of the district I certainly did not see any dunghill that would load five single-horse carts. The quantity of manure is very much diminished by the pernicious custom of using cow-dung for fuel, although this is more prevalent in some other districts than in Dinajpoor. It is true that the dung is usually collected from the fields, and would never have entered the farm-yard, but even that deprives the fields of the manure, which they would otherwise receive, and the evil is increased by mixing the cow-dung that is to be used for fuel with oil-cake. This is

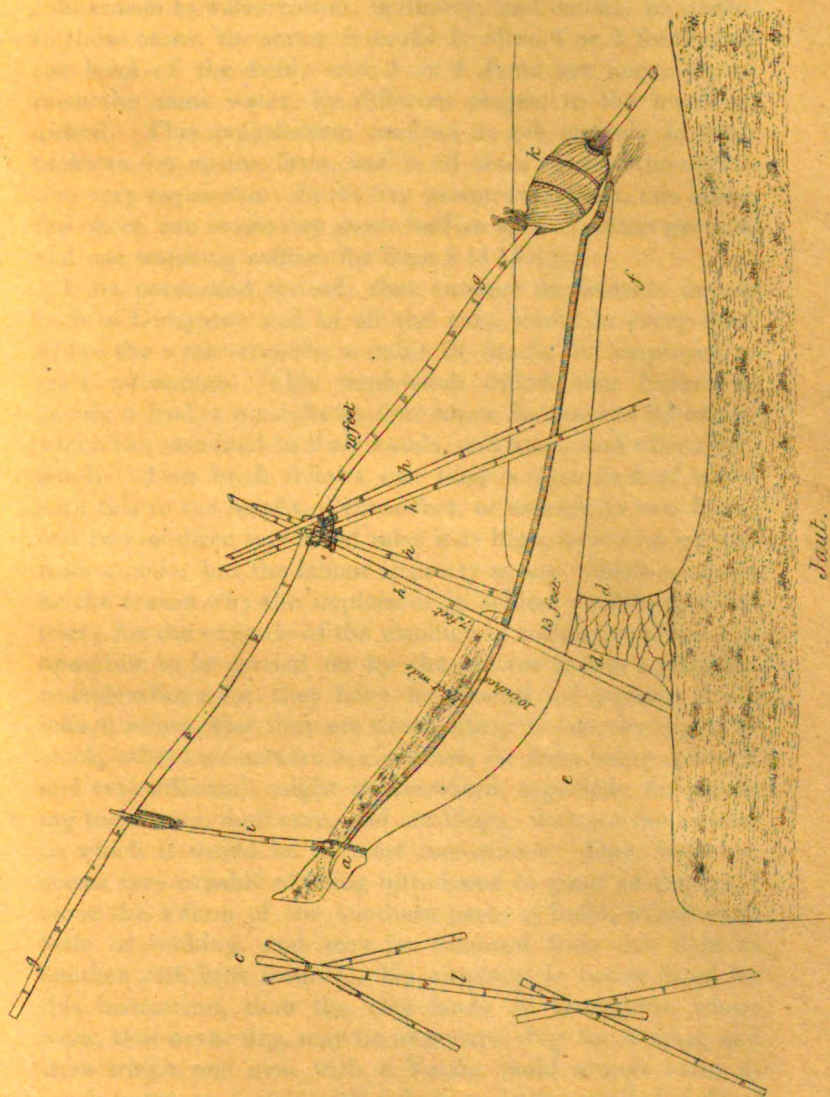
another substance that necessity has compelled the farmers to use in rearing sugar-cane, the quantity of cow-dung being so small, that it is totally inadequate. They have therefore been under the necessity of using for manure the best food that they have for their cattle. Ashes are used as a manure; but as there are no fires, except for cooking, the quantity is very small.

The farmers here are quite unacquainted with the valuable manner of manuring fields into which rice is to be transplanted, by treading into the mud the branches and leaves of all kind of plants, which in a hot climate immediately rot. This is practised in the south of India with great advantage, and might be equally so in Bengal. One of the most valuable manures used in this district is earth from the bottom of tanks, marshes, and ditches, which is procured in the dry season, after it has been strongly impregnated with vegetable and animal substances by the rains. This is chiefly used for sugar-cane, but might be more generally employed.

Fortunately irrigation is not so necessary here as in the south; but still in many cases it is of great use, and is frequently employed, although not so often as it ought. The crops of rice might be much more certain in the stiff clay soil were there adequate means to give the fields one good watering in October, for it is generally owing to a want of rain in that month, that the crops of rice turn out scanty. The number of tanks that abound in every part of this district, whereever the soil is of that nature, facilitates the operation, and recourse is had to them whenever the crops are suffering; and as most of the tanks contain springs, the supply of water is generally sufficient. When the rains of spring fail, recourse is also had to the tanks, in order to enable the farmer to raise seedlings for transplanting, and, by means of a watering given to the fields near tanks, many of them can be ploughed in the dry season, and produce two crops of rice, the importance of which I have already stated. Without watering, these fields would be so hard, that the plough would have no effect.

The means for raising water are not very perfect. At the season when irrigation is mostly wanted for the rice fields that are in danger, the water in the tanks is seldom more than one or two feet below the level of the field, and the imple-

ment usually employed answers tolerably well for the purpose. It is called Jant, and is in form of a rude canoe, of which one end has been cut away (*Plate* 10). The length is about 13 feet, the width 1 foot, and the depth about the same. It is placed with the entire end (*a*) towards a canal (*b*), leading from the tank (*cc*), and moves upon a fulcrum (*d*), placed near its centre of equilibrium. The cut end (*e*) is placed over a canal (*ff*), that communicates with the field. The entire end is first pushed down into the water of the canal that communicates with the tank. It is then raised, until the the trough is on a level, when the water flows into the field from the open end. The moving power is a lever (*gg*), supported by four bamboos (*hhhh*), which stand over the trough, and are tied together at the upper end. The lever is a bamboo, about 20 feet in length. Its extremity, towards the tank, is fastened to the entire end of the trough by a bamboo (*i*), which is of a length just sufficient to raise that end of the trough to the proper level, when the extremity of the lever next the field touches the ground; and this extremity of the lever is loaded with clay, fastened by means of straw (*k*), so that it is heavy enough to raise the entire end of the trough when that is filled with water. The only other power wanted is a man, to sink the entire end of the trough into the water. He is placed very awkwardly on a bamboo (*l*), which is supported by four others, stuck into the side of the tank, and he keeps himself from falling by a pole, which he holds in his hand. He places his foot on the end of the trough, and sinks it down, until it is filled; he then removes his foot, and the lever raises the water. His position is tiresome, and, to fill the trough, requires a considerable exertion, which might be much diminished by a simple valve in its bottom. I am persuaded that the instrument might be still farther improved, by making the entire end of the trough heavy enough to sink of itself, and, by applying the man's force in place of the weight of clay, to depress the end of the lever next the field, where his situation would be commodious, and his power might be increased by lengthening that end of the lever. Although one man can work this machine, two men are generally employed, one to relieve the other. They only work the usual ploughing time of five hours a day.

Whenever the water is to be raised more than 18 inches,

Jaut.

London. 1838. W. H. Allen & Co. 7, Leadenhall St.
J. Netherclift Lithog:

the Jant becomes a very imperfect instrument, but, as it is at hand, it is the one commonly employed for raising water in the spring to rear seedlings, or to enable the farmer to plough some of the adjacent fields; and it is also employed in the cold season to water cotton, mulberry, and onions, or garlic. In these cases, the water in tanks is often 4 or 5 feet below the level of the field, and 3 or 4 Jants are necessary to raise the same water, by different stages, to the level required. This imperfection confines its use entirely to such tanks as dry up but little, and in all cases renders the operation very expensive. In the dry season two Jants, one above the other, can in one day water half an acre of cotton ground, and one watering suffices for from 8 to 12 days.

I am persuaded indeed, that another implement, in use both in Dinajpoor and in all the east, would in every case, where the water exceeds a cubit in depth, be employed to more advantage. This implement, called here Siyuni, is merely a basket wrought by four ropes fastened to its edges, which two men hold in their hands, and lower and raise alternately. Two brisk fellows can raise a vast deal of water with this to the height of three feet, or as high as two Jants, and two or three sets could raise it as high, as is ever wanted from a tank; but the labour is pretty severe, which seems to be the reason why the implement is seldom used in this district; for the expense of the machine is nothing, and in every operation to be carried on by the natives that is a principal consideration; for they have in general no capital. I am indeed afraid, that they are never likely to acquire a proper stock, otherwise numerous machines, far from being complex and very effectual, might be contrived, especially for watering the cotton, mulberry, and seedlings, that are the articles to which it would be of most importance. One, however, seems very capable of being introduced to great advantage, I mean the Yatam of the southern parts of India, which costs little or nothing, and may be removed from one field to another with little trouble. No situation is better fitted for this instrument, than the clay lands of Dinajpoor, where wells, that never dry, may be in general dug for 8 anas, and from which one man with a Yatam could always raise as much water as a man with a Jant can raise to the height of 18 inches from a tank. In one part of this district I found

such an implement in use. In division Purusa it is called Dab, but is more rude than those used in Mysore, and infinitely inferior to the improved Pakota of Madras.

The reservoirs and canals, that are formed in the south of India for irrigation, would here be in a great measure superfluous, and most of what seems requisite in that way has already been done. In many old water courses which are filled only in the rainy season, a part of the water is confined in the upper part of the channel, at the beginning of the dry season, and is allowed gradually to flow out to water the spring rice, that is cultivated in the lower parts. Some navigable streams have been dammed up for the same purpose; but the loss suffered by commerce seems in general to be greater than the advantage derived by agriculture.

Floods and Banks.—In the Appendix I have mentioned, that about 380 square miles of this district are every year inundated, and that in the present state of agriculture, not above 120 of these are considered fit for cultivation, and that a great part even of this is only occasionally tilled. It might be therefore supposed, that great advantage would be derived from banks, and under certain conditions I admit, that such may be the case. I am, however, of opinion, that no expense should be incurred on this account by the public, and that for the following reasons: first, the land thus inundated, even without banks may be made productive both of several crops, and of good pasture. For instance, wherever the soil is tolerable, it would give two or three crops of millet (*Panicum italicum*), or of barley, wheat, or mustard, and then for three or four years would produce a short soft grass fit for cattle to eat; and this mode of cultivation I should consider as by far the most advisable for such situations, were not the prejudices of the natives in favour of common pasturage, so strong, as to leave little hope for expecting, that this pasture could be appropriated to the cultivator. Wherever this land was near high ground and indigo works, a part might be employed for indigo to great advantage, without altering the plan, which I have now suggested. Secondly, the inundated spaces are generally narrow and of great length, so that the expense of a general bank in proportion to the extent recovered, would be great; and, although in such cases it would be perfectly just to levy a

tax on the proprietors of the land, there is great reason to suspect, that the profits, which they would receive, would not enable them to pay a tax equal to the expense; without which the undertaking would be altogether absurd. Thirdly, the distress, that arises from the breaking down of general banks, which is occasionally unavoidable, and which at once involves thousands in misery, should prevent this mode of securing land from being often employed. It is probably much better, that a country should maintain 100,000 people living in security, than twice that number in constant danger of losing not only all their property, but their lives.

For these reasons the banks, that I could wish to see, are those formed on a small scale by the proprietors of the land; so that, although a few of them should give way, no material injury would arise, and so that none should be attempted, where the advantage would not be evident. A few such have been formed, and I have no doubt will gradually extend, as there is much reason to suppose, that a great part of the inundated land might, on this plan, be secured with benefit to the proprietors; for, taking advantage of natural inequalities of the surface, considerable spaces might be nearly enclosed by banks not above two feet high, and almost the only expense would be to fill up the intervals between these banks. Even this expense would fall very easy on a landlord, who watching the favourable times, when his people had little or no employment, might procure their assistance at a very trifling expense, and probably merely by giving them the lands, for a few years, at a low rent.

Domestic Animals.—By far the most important domestic animal in this district is the ox, which is of the kind called Zebu by naturalists, and of the variety which has the horns placed forward, so as to form a considerable angle with the face. It may be said, that in the district no care whatever is taken to prevent the degeneration of the breed, while the food is uncommonly scanty and bad; so that it would be difficult anywhere to find more wretched creatures. I have never seen a poorer breed, except on the coast of Malabar. Notwithstanding their being small, and wretched from a deficiency of food, the breed is not deformed, and those of which any care is taken are very handsome animals; but rather too finely shaped for labour. They are of many co-

lours, but white is the most prevalent. By the natives they are usually divided into two kinds, one fit for the plough, the other for burthen; but this discrimination is not accurately observed. In the dry season every ox in the clay country is employed in carrying rice to market; and, except a few belonging to merchants and manufacturers, almost every one in the rainy season is employed in the plough. The difference arises from those called burthen oxen being rather larger and better fitted for the road, while the most miserable creatures are considered sufficient for the plough. Indeed not only many of the Moslems, but even many of the low tribes of Hindus employ the cow in the plough, which by the proper custom of Hindu nations would be punished with death. The common plough cattle cannot carry more than 60 sers of 96 s. w., or $147\frac{3}{4}$ lbs., and many are able to carry only two-thirds of that weight. Those that can carry from 80 to 120 sers, or from 197 lbs. to $295\frac{1}{2}$ lbs. are reckoned good burthen cattle. Some fine ones, however, are occasionally imported from the neighbouring district of Puraniya; but the number is quite inconsiderable, and in a general estimate may be altogether neglected. Indeed the people in general have no means of feeding such heavy cattle. The usual price of the common plough breed is about 3 rs., that of the carriage breed amounts to five or six. The cow and ox, of the same size, are nearly of the same value.

I have estimated the number of ploughs at 480,000, and the allowance for each plough, being two oxen or cows, would make 960,000 the number of labouring cattle employed; but perhaps 40,000 are wrought by cows and 440,000 by oxen, which will reduce the number of the latter to 880,000; but as many are wanted for carriage, on the whole perhaps in the district there may be 980,000 adult oxen, 100,000 of which may be of the better breed.

It is said by the natives, that the male animals of this species that are born, greatly exceed in number the females; but I am uncertain how far this may be true. The usual estimate is, that there are 35 breeding cows for every 100 head of labouring cattle; besides therefore the 80,000 labouring cows, which do not breed, as there are 960,000 labouring cattle, we must allow 336,000 breeding cows. The 100,000 carriage cattle are partly supported by importation, but about 30,000

cows may be necessary to supply the deficiency, and about 20,000 are kept by people in villages who have no farms, and 10,000 are kept in woods and wastes by the herdsmen of wealthy persons who have large flocks of milch cows. It is therefore probable, that the adult females may be about 446,000; of these 80,000 may be employed in the plough, and 316,000 more may belong to cultivators, and live on the farms, 20,000 may live about towns, and belong to Brahmans, rich people and tradesmen, who do not cultivate land, and 10,000 are the property also of wealthy men, and are fed in woods and wastes under the care of herdsmen. The young cattle of this kind will be about equal in number to one-half of the adults, and there may be about 20,000 bulls, so that the total number may be about two millions.

In the clay countries that are fully cultivated, the number of cattle bred is not adequate to the demand; but where there are large tracts overgrown with wood, such as near Maldeh, Ghoraghat and Jogodol, the number is more than sufficient. On the whole there is no occasion to purchase the common plough cattle from other districts; but perhaps 1,000 head of the better kind of oxen are annually imported.

The cows that are kept about farms and villages, are turned out to feed on the pasture about seven in the morning, return home in the evening, and remain all night in a hut, where they are allowed a little rice straw to eat, and in the rainy season some grass, which is cut from the little banks that divide the rice-fields. If the proprietor is rich, they receive also a little oil-cake or bran, which alone renders their condition tolerable, as the quantity of straw is very small, and at some seasons the food that can be procured on the pasture is next to nothing. The oxen are treated much in the same manner, only their time for procuring food is abridged by the five or six hours, during which they are employed in labour; and it is very seldom that the mere plough cattle receive either bran or oil-cake. These are reserved for the cows of the wealthy, and the oxen employed to carry loads. The pasture in this country consists of the following descriptions of land:—

First, Of 261 square miles of inundated land, which is totally inaccessible during the rainy season, and in the dry is mostly overgrown with harsh coarse grass, which no hunger

can enable an ox to swallow. The only nourishment which the ox kind can procure from this land, is some fine grass that creeps among the reeds, and of this the quantity is so small, that one acre of meadow land in England may with safety be asserted to produce more grass fit for a cow, than 20 acres of the marsh land in Dinajpoor. This land is also disposed in such large masses, that it is accessible to the cattle of only a small proportion of the country.

Secondly, There are 221 square miles of woods and forests. In these the pasture is rather better, and they are accessible at all seasons of the year. In the dry season the bushes preserve the vegetation from being entirely burnt, so that perhaps 10 acres give as much pasture as an acre of meadow land in England; and being more equally interspersed than the inundated land, they are a much greater resource for the cattle of the farmers.

Thirdly, A greater resource, and in many parts almost the only one, is in burial-grounds, roads, market-places, and in steep barren lands, such as the banks of tanks, sandy heights and the like, of which I have estimated the extent at about 300 square miles. During the rainy season, or for about six months in the year, these produce a tolerable pasture, and I am told, that the cattle then are in decent condition. In the remainder of the year the herbage on these parts is quite burnt up, and though the cattle are turned out upon them, it may be considered chiefly as a means of giving them air. In the fine rice countries of a clay land, necessarily abounding with labouring cattle, this is almost the only resource. The cows that are kept there, are few in number in proportion to the oxen, and it is there chiefly that they are yoked in the plough. The quantity of straw also is considerable, and the cattle are often sent to other parts, when not wanted for the plough.

Fourthly, The lands that have been deserted and are not overgrown with forests, or that are occasionally cultivated amount to about 650 square miles, of which about 520 may be in pasture. This is chiefly in the parts where the free soil prevails, and in the rainy season it is a great resource for the cattle. Except in some parts that are flooded, the pasture is then very good. In the dry season it is much parched, and then the part that was inundated becomes useful, as it always retains a little moisture. In some parts strangers

encroach very much on this land, and in the rainy season the cattle from all the low land near the Nagor, fly to the heights of Hemtabad and Akhanogor.

It would thus appear, that it is only during the rainy season that the pasture affords a tolerable nourishment to the cattle, and even that, only in some parts of the district. At that season, they are compelled to fly from the inundated lands, and in the best cultivated parts, where the soil is of a stiff clay, there is no extent of pasture for the cattle to enjoy. In the dry season want is felt everywhere, except immediately after the rice harvest, when the cattle are turned into the stubble, and the eagerness with which they devour the coarsest stems to the very ground, is a clear proof of the misery which they suffer.

The pasture lands are everywhere left to nature, and in this district she has not been bountiful in grass, that is fit for cattle to eat. It would be in vain to expect that any attention should be paid to improvement, where there is a right of common pasturage, and this must continue so long as the property is vested in Hindus, at least so far as respects cows and oxen; and while these are allowed to roam at large, it is of no utility for any man to improve a field of grass. The inundated lands and woods of this district, which at present are of little or no value, would maintain a great many cattle were the land cleared; and were they granted to Muhammedans or others, who were authorized and willing to exact money from every beast that fed in them, it might be worth their while to clear them, and to free the country from the nests of those destructive animals that now ravage its crops. It might perhaps be just to seize upon these lands, from which the present proprietors receive no advantage, and which they are either unable or unwilling to prevent from being a nuisance.

Almost all the proprietors of land being Hindus, their customs regulate every thing respecting cattle, and no rent is demanded for the pasture of the ox kind, nor are they hindered from going on any field that they choose, which is not producing some crop. This wretched liberality is a complete bar to all improvement of the pasture, or indeed to the introduction of any good plan of agriculture. In the parts where there is any considerable extent of pasture without

cultivated fields intervening, a boy is hired to tend the cattle of the village while at pasture, and one boy can keep about 25 head. His reward consists of food, and a rag to tie round his middle, which is estimated at eight anas a month, so that he receives about three anas a year for each head of cattle. Where there is no pasture except on roads, market places, high broken corners, and the like, the cattle, when there is a crop on the ground, are usually confined on the pasture by a tether. When the crop has been cut they are allowed to range on the stubble under the care of a boy.

The males that are kept for breeding are chosen with little pains or attention, and no higher price than usual is ever given for the sake of improving the breed. Among the Muhammedans the rich farmers keep bulls, and these are allowed to impregnate the cows of their poor neighbours without reward. Among the Hindus a very pernicious custom prevails. When a rich man dies, and when after the mourning the ceremony called Sraddho has been performed, a young bull is consecrated with much ceremony to Sib, and is married to four young cows. At the same time a post, much carved, and containing an image of a bull, is planted in the ground near some public place. A mark is then put on the bull, and he is turned loose. He may go where he pleases, and it is not lawful to beat him, even if he is eating a man's crop, or enters a shop, and is devouring the grain that is exposed to sale. The sufferers shout, and make a noise to drive him away; but he soon becomes reconciled to this idle clamour, and eats very quietly until he is satisfied. These consecrated bulls (Sangr) accordingly become very fat, and are fine animals, but exceedingly destructive. The wives are given away to a Brahman, are not treated with any uncommon respect, and their husband has no particular connection with them, but serves as a common town bull. In this district, fortunately, they are not numerous. This idle ceremony never costs less than 50 rs., and often amounts to 500. The two last Rajas of Dinajpoor, among numerous other contrivances for ruining themselves, in which they had great success in a very short period, consecrated about 2,000 cows in the same manner, and dedicated them to four temples at their four favourite places of residence. As no person presumed to molest any of these sacred animals, the places became imme-

diately waste. Mr. Hatch sold all the cows except 100, which an old lady of the family still retains, and is probably soothed in her misfortunes by this mark of respect; but her cows, although beautiful creatures, are a great nuisance.

The Hindus of Bengal, before the Muhammedan conquest, are said never to have castrated the bull. In fact, I found that any questions on this subject were exceedingly disagreeable, and that although the landlords and their agents tolerated the practice in the Muhammedans and impure tribes, yet they considered it as very illegal and disgraceful, and not fit to be mentioned. I suspect, therefore, that until the Muhammedan invasion Bengal must have been either cultivated with the hoe, or very much neglected, for much cultivation could never have been carried on by the bull. Pliny indeed mentions the elephant as the common labouring cattle of India; yet it is difficult to suppose that he has not been in an error. Castration is performed by the very lowest people, and is generally done by excision. The bull is not castrated until his third year, nor wrought until his fourth, and generally lives until about 12 years of age, when he is completely exhausted. He is wrought in the plough about five hours in the day, and draws by the shoulder, the yoke passing over his neck. As the yoke is never stuffed, and as the saddle on which he carries loads is seldom good, the poor animal is often miserably galled, and covered with sores. He is driven by a goad, and by twisting his tail, and very few old oxen have this member entire and unbroken. Fortunately for the cattle of this district the wise men are not so fond of cautery as in the south of India.

The cow usually has her first calf in her fifth year, and being better treated lives for 15 years. Some have a calf every year, others only once in two years; but the farmer's cattle are reckoned to be only one half of their time in milk. The calf is allowed to suck all day but is tied up in the evening, and the cow is milked in the morning, before her calf is turned loose. The common farm cattle, on an average, give to their master half a ser a day for one half of their time, or six months in the year. Those of the better breed, when fed by a Brahman, give double that quantity. The advantages, therefore, which a farmer receives from his cows are as follows:—1st. They keep up his stock of labouring cattle, so

that in stating the expense of a farm nothing should be allowed on that head. 2dly. The cattle produce manure. 3rdly. They give a small quantity of milk. Of the 336,000 cows in this district which belong to farmers, perhaps ⅕ or 67,200 are of large breed, and give one ser a day, or 180 ser a year, worth six rs., and the remaining 268,800 give one-half of that produce; so that the total value of the cows' milk that the farmers of the district obtain may be 12,09,600 rupees. The expense of boys to tend these cows may be 69,600 rs. a year, leaving a net profit of 11,40,000 rs., or 2 rs. 6 anas a plough. It would be unfair, however, to state the whole of this to the profit of the cattle, for if the farmer put a value on the straw which he gave to each cow, the profits would in a great measure disappear, and those arising from the cultivation of rice would be greater than I have stated, for I have valued only the grain. In fact where there is a demand the poorer farmers in general prefer selling their straw, and wherever there are many people in easy circumstances who are not farmers there is a demand, for rich people wish to have cows of their own, in order to avoid the adulteration and nastiness of the milk that can be purchased.

Although a large proportion of the farmers are Muhammedans they derive little or no profit from the meat of their oxen, for they are so strictly watched by the Hindu landlords and their agents that it is almost impossible for them to kill a beast without detection, and every means in these people's power would be employed to ruin a culprit. It is chiefly under the immediate protection of the European magistrate, and of the two Muhammedan saints at Peruya, that the luxury of beef can be enjoyed; and, from all that I could learn, less than 100 head of cattle are killed in the course of a year. On the whole, the farmers of this district would suffer little were the breed of oxen terminated, for the value of the milk is not considerable, and the same number of people might cultivate the ground to much more advantage by the spade or hoe, as is done in China and Nepal. Were that the case the little injury that would be suffered by the loss of the milk would be amply made up by the saving of herdsmen, by the preventing depredations on the growing crops, which are very considerable, and by the saving on stock.

People in easy circumstances in towns and villages, as I

have already said, are very desirous of keeping cows, in order to procure milk free from adulteration, and somewhat clean; and accordingly, so far as I have been able to learn, about 20,000 head are kept, and are comparatively in excellent condition, not that they are fed like the cattle of England, but they may receive as much nourishment as those in the highlands of Scotland. In the town of Dinajpoor a cow of this kind often gives two sers of milk to her master, but one ser, or 180 sers a year, may be the usual rate; and as milk is dear in towns it is valued at 20 sers for the rupee, altogether nine rupees. During the six months when the cow is in milk she is fed with straw, bran, and oil-cake, and her food may cost eight anas a month. During the other six months she is allowed only a little straw and the wretched pasture in which she is allowed to range; this may cost four anas a month, or altogether 4½ rupees. The gross produce will be 180,000 rupees; the gain, besides procuring good clean milk in place of bad and dirty, is 90,000 rupees on a capital of 120,000. Brahmans or Hindus of pure birth, who are the people that usually keep these cows, ought not to sell the calves, but should give away in charity such as are superfluous; a great many, however, are forgetful, and make a little profit by disobeying a rule in which there is neither policy nor virtue.

I have mentioned that about 10,000 cows are kept entirely in the woods and wastes of this district, and never enter the villages. It has probably been the immense profit which arises from this description of cattle that has led to an opinion of cattle being the principal wealth of an Indian farmer. In this district there are not 500 of these cattle that belong to farmers. Some are the property of landlords, of their agents, and of merchants; but by far the greater part belong to Goyalas or milkmen, and by far the greater part belong to the people of Maldeh. A few from the banks of the Nagor and Kulik go every year to Morong; but I shall defer saying any thing on that subject until I have access to the frontier of that country, and shall here confine myself to the manner in which the Goyalas of Maldeh and its vicinity manage their cattle. Each herd consists of from 100 to 500 adult cows, which in the rainy season are fed in the woods of Peruya, or in those between the Tanggon and Punabhoba, and in the dry season pasture on the inundated lands that

are near the former river. During the latter season they never enter the house, but in the nights of the rainy season they are sheltered under long sheds. In the inundated lands a fence of dry thorns secures them, at night, from the beasts of prey. The following estimate was given by a Goyala of the profit and loss of a herd of 100 cows kept in this manner:—

CHARGE.—Prime cost 100 cows from 3 to 9 rs. 600 rs.; 5 bulls at 4 rs., 20 rs.; total, 620 rupees. Annual charge. Interest of stock, at 12 per cent., 74 rs. 6 anas, 4 pice; 1 chief herdsman, at 3 rs. a month, 36 rs; 3 inferior herdsmen, at 2½ rs., 90 rs.; rope, at 2 rs. a month, 24 rs.; 1 blanket to each herdsman, 4 rs.; sacrifices, 10 rs.; petty charges of various kinds, 15 rs.; total charge, 253 rs. 6 anas, 4 pice, profit.

There are 70 cows in milk, for in this state the cattle seem to retain their milk longer than when confined about villages. Each cow gives from ¼ to 1½ ser, but the daily average produce is about 50 sers, which at Maldeh is worth 20 sers for the rupee. The total annual produce is 912 rs. 8 anas. The milkmen of the town go to the herd, and purchase the milk on the spot, at the rate above mentioned. The number of female calves keep up the herd. There is no rent. The avowed profit, besides full interest, is therefore 659 rs. 1 anas, 8 pice, on a stock of 620 rupees. The Goyala was evidently concealing the value of the young oxen sold, this being a disgraceful action. But a capital of 620 rs. is so large a sum that the trade is not overstocked, and the pasture is capable of supporting many more cattle than now feed on it. The gross produce of these cattle may be reckoned at 90,000 rs. a year. These two last methods of keeping cattle are highly advantageous, and might not only be continued but greatly extended, were the farmers to adopt the cultivation by the hoe. The cows would supply milk for the luxurious, and the oxen that were bred would be sufficient for the road, and might be kept in tolerable condition.

With the immense population that overpowers this country, even were the opinions of the people compatible with eating butchers' meat, the means of procuring it are totally inadequate, and there is no possible way of finding food for such a multitude, except by the cultivation of grain. The means that this affords are indeed ample, and there is, besides, sufficient room for the cultivation of many valuable articles, such

as opium, cotton, silk, and indigo, that will enable the country amply to repay whatever it wants from foreigners. The resources, therefore, which cattle give to the country are so trifling that on all occasions they should give way to whatever may promote cultivation; that is, so long as the population continues at its present enormous standard. If the people could be contented to avoid breeding children so fast, and the population were reduced two-thirds, the condition of the cattle might enter into the system of agriculture, and all ranks might share in the comforts to be derived from the skins and meat, and their condition might in many other respects be improved; but this would require the introduction of so many new customs, directly in opposition to those which now prevail, that the hope of such improvements being realized may be looked upon as a dream.

Provided it were practicable, the principal objection against introducing the hoe husbandry in place of the plough would be the loss of manure. This is the essence of good husbandry, and the cow is at present the only animal from whence the farmer of Dinajpoor receives a supply. This supply is, however, so scanty that, I am persuaded, more advantage might be procured from collecting the straw in pits, where, mixed with ashes and whatever soil could be obtained, it would rot, and give a much greater supply than what is now procured. But the custom of ploughing with cattle is so habitual that no means exist to eradicate it were the measure advisable, at least it must be a work of great time and difficulty.

In this district the buffalo (*Bos bubalus*) is of little importance. The number does not exceed, 5000 adult females. Perhaps a thousand may frequent the banks of the Nagor and Kulik in the rainy season, and in the dry are sent to Morong. For the present I shall pass over these, and content myself with noticing the manner in which the people manage about 4000, that are fed chiefly on the banks of the Tanggon and Punabhoba. The Dinajpoor Raja, however, possesses a considerable herd, that feeds partly near Nawabgunj, and partly in the Rongpoor district; but an account of these also, as common to two districts, may be at present omitted. The management of a herd of buffalos and a herd of cows is nearly the same. In the dry season they frequent

the inundated lands and marshes, and in the rainy season they are led to the woods; but the buffalos require no precaution to keep them from wild beasts. Both kinds of cattle are subject to a disease called Bosonto or small pox, which comes once in 9 or 10 years, and kills a great many; but the young females being added to the flock, the number increases greatly before the next occurrence of the disease, and the average number of the herd should be reckoned on the fourth or fifth year after the calamity has happened. This disorder has not the smallest affinity to the vaccine.

The tame buffalo of the district is a very fine animal, nearly resembling the wild one. Indeed the breeds are very much intermixed; for many people keep no males, and allow the wild bulls to impregnate their tame females. Some persons also endeavour to seize upon wild males, and after taming them keep them for breeding. On the contrary others allow their young male calves to run wild, as the demand here for them as sacrifices is small, as they are never employed either for carriage or in agriculture, and in the wild state their depredations tend to prevent the encroachments of agriculture on the pasture.

Why the males are not employed in labour it would be difficult to say, as they are very much fitted for the low lands of this district. The great demand for sacrifices has probably prevented their being used in the districts, which lead the fashion, and that is blindly followed, where the same cause does not exist. The following is a statement of the expense and profit of a herd of buffalos, consisting of 100 adult females.

Charge.—Prime cost of 100 females at 8 rs., 800 rs.; 4 males, 32 rs. Total 832 rs.

Annual Expense.—One chief herdsman, at 2½ rs. per month, 30 rs.; four under herdsmen, at 2 rs. per month, 96 rs.; clothing for the herdsmen, 18 rs.; one blanket for each, 5 rs.; rent for pasturage, 5 rs.; sacrifices, 5 rs.; interest of stock at 12 per cent., 99 rs. 13 anas, 5 pice. Profit 258 rs. 13 anas 5 pice. Sixty female buffalos in milk give on an average 120 sers a day, worth 3 rs., 1095 rs.; six male calves at 3 rs. each, 18 rs. Total 1113 rs. The neat profit, besides interest, is therefore 854 rs. 2 anas 7 pice on a capital of 832 rs.

The milk is bought, in the same manner as that of the cows, by people who reside in villages, and who prepare it in the various ways used by the natives. The annual value of

the whole milk produced by the 5000 buffalos will be about 54,750 rs. The annual value of the whole milk produced in the district may be estimated thus:—

Cows belonging to farmers, 1,209,600; ditto to villagers, 180,000; ditto to Goyalas, 90,000. Total cows' milk, 1,479,600; buffalos' milk, 54,750. Total 1,534,350.

The milk has been valued partly at the highest price of Maldeh and Dinajpoor, and partly at the low price of country places. This compared with the produce of the arable lands is about one-fifteenth part of the whole. I must also observe, that, although those estimates were given by people interested, who seldom in this country exaggerate their gains, I suspect, that the actual produce of the dairy is not near so much.

Goats are very generally kept by both Muhammedans and Hindus of impure birth, and are very numerous, probably not less than 800,000. They are of the common short-legged smooth-haired breed, and have degenerated as much as possible. Their milk is never used; indeed they are so poorly fed, that none could be taken without the utmost danger to the kid. They are, however, a great source of comfort to the people; for the males about six or seven months old, after having been offered to the gods or saints, afford the votary a nourishing food. Perhaps 300,000 may be sacrificed in the year, worth on an average 6 anas, or on the whole, 125,000 rs. Sheep are of much less consequence. They are nearly of the same breed with those called Curumbar, which I have described in the account of my travels into the south of India; but both their wool and milk are entirely neglected. The number is very inconsiderable, and the only useful produce is the skin, and the young males, that are offered in the same way as goats. The natives prefer the goats' flesh, although to Europeans nothing can be worse, and no meat can be finer than that of the Bengal sheep.

Notwithstanding the prevalence of the Moslems, swine are more numerous in this district than sheep; which, according to different views of the subject, is reckoned by some to be owing to the want of shame in the low Hindus, while by others it is attributed to their good sense. The animals are very much neglected, are never fattened, and are allowed to eat and wallow in every kind of impurity; but in this re-

spect they are little inferior to the sacred animal of the Hindus, which in its distressed state in India is a very impure feeder. The meat of the hog, however bad, is a great resource for the poor, who rear the animals at little or no expense; and is offered by them to the gods. In some parts they even procure money by selling them to people, who come from Bhotan; and it is rather remarkable, that the chief agent in this commerce should be a Muhammedan, a merchant of Rongpoor.

In this district the condition of horses is exceedingly low; perhaps there may be 2000 ponies of a most wretched breed, which never receive any nourishment, except what they can glean in the fields, and which are totally unacquainted with comb, brush, scissors, or shoe. Their value is from two to five rs. each. The greater part belong to Fakirs, who retain some faint tincture of the love for the noble animal, which was so eminent among their progenitors. A rather better breed of poney is brought from Bhotan, and is called Tanggon. From the Ayeen Akbery it would appear, that Ghoraghat, in this district, was formerly celebrated for that breed of horses. I do not, however, think it probable, that any considerable number was ever bred in the plains of Bengal; but I suppose, that many were brought to Ghoraghat as the most convenient market, just as they are now brought to Rongpoor. The number in this district may be about 400, and they are of the very worst quality, 20 rs. being considered as a high price. Except the horses belonging to Europeans, there is not one in the district fit to mount a trooper.

Dogs, that have such a familiarity with man in Europe, are not admitted to that honour in India, and no employment can be more disgraceful than the taking care of this fine animal; yet the breed is very numerous, and every village swarms with half starved curs. They eat all manner of carcasses and impurities, and are not reckoned the property of any individual. The natives seldom enter into any sort of familiarity with them, nor are the children ever seen either caressing or tormenting them; but they are tolerated, and one or two, according to the wealth of the family, are permitted to eat the scraps. In return they sleep in the yard, and make a noise when any stranger approaches, especially at night.

The bitches are few in number, and generally more starved than the dogs, as they are weaker, and no one interests himself in their quarrels; but they are so prolific that the number of dogs always exceed that of the houses which give them shelter, and a large proportion have no resource but to live, like jackals, upon whatever comes in their way, and numbers are hanging about the villages in the utmost misery. Their nature, however, is very different from the suspicious temper of the jackal, and the least attention shown to one of these dogs is repaid with gratitude. The most moderate feeding attaches him instantly, and he stands on the defence against all strangers, not only of the canine species, but against men of every description different from those that feed him. I often observed, that the dogs, which followed my party from the villages on account of the offals, became quite enraged when a villager approached; and no sooner were their most pressing wants supplied than they began to look out for distinction. At first they were satisfied with attending the servants and other people at meals, and gratefully took whatever was left; but after they were a little fattened, their principal delight was to follow me, when I either walked or rode on the journey; and although I never fed them, the least attention on my part seemed to fill them with joy; for they very soon discovered that I was the chief person in the company.

Cats are much in the same predicament with dogs. They are just tolerated, and live in a half domestic half wild state. They are not numerous.

Owing to the number of Muhammedans fowls are abundant; by the Hindus of Bengal they are reckoned impure. Every Muhammedan family has some, which receive shelter in its huts, and sometimes a little grain. They are never fat, and few are sold; but they are no doubt the best animal food that the natives enjoy, and there is scarcely any Muhammedan family so poor, but that can occasionally offer a fowl to a saint, and eat the meat.

Both low Hindus and Muhammedans keep ducks; but they are not so numerous as fowls, and although they are never confined, nor kept from impure feeding, are higher priced than pullets.

Pigeons also are very plenty and cheap. Many people

keep them merely as pets; but at all times they are procurable in abundance.

Geese are chiefly kept by rich men as pets, as swans are now in England, or as geese were by our ancestors when invaded by Cæsar. They can seldom be procured to purchase, and are never fattened.

In many parts no person has even heard of a turkey; in others, people who have gone to Dinajpoor on business, have seen the animal in the judge's farm-yard, and have told their countrymen of its wonderful appearance.

Fences.—Very little of this district can be said to be fenced; and in many parts the fences include merely the yard and kitchen garden. The houses of the natives, as I have before mentioned, consist of several huts occupying a yard, that is almost always enclosed. By the natives the whole collectively is called Simana, and it has been called Compound by the English, for what reason I do not know. The yard, or the space within the fence that is not occupied by houses, is by the natives called Uthan. The fence seems intended for two purposes; to conceal the family and especially the women from view or intrusion, and to keep out thieves and robbers. Where the soil is a stiff clay, the fence is generally a mud wall, between five and six feet high, the top of which is thatched to prevent the rain from washing it away; for there is no clay in this district like that of Mysore, which with a very moderate repair will resist the rain for ages. This is a great loss, as the thatch is both expensive and facilitates the communication of fire, and is besides ugly. It is probable, that a few broken bricks or pots, mixed with the upper layer of clay, might enable the wall to stand a rainy season. The expense of annual repairs would be a mere trifle. These mud walls are by far the best fences for every purpose required; but, although they often exclude thieves, they are no security against robbers, who in this district are said to be very numerous and cruel. The houses are too much scattered to enable the natives to secure themselves and their cattle from robbers by means of a common mud wall, or fence of thorny plants, as is done in Mysore. Indeed, their eagerness for concealment and privacy would not allow them to live huddled together in the small spaces that the villages

of Mysore occupy. In the parts where the soil is loose, and will not form walls, the fences are not so good. Very poor people generally throw up a bank of earth from a ditch, and plant a row of reeds on the top of the bank, which gives them privacy; from thieves they are in no danger, having nothing that can be stolen. More wealthy people surround their yards by hurdles made of straw or reeds, and the wealthy make neat bamboo railings, often eight feet high, and line them with mats of bamboos, which gives privacy, while the railings exclude ordinary thieves. The robbers of this district go in too great numbers, and are too bold to be excluded by any fence, that is not defended from within; and their cruelty has struck such a terror, that flight is the only thing thought of on their approach.

The gardens in which vegetables for the kitchen are reared, and a small spot contiguous to the house for some rich crop, such as tobacco, are also generally fenced to exclude cattle. In parts where the soil is stiff this is done very effectually by a ditch and bank of clay, which is repaired every year at a very trifling expense, and, indeed, in many places, every part of this soil, except the rice fields, is enclosed in this manner. Inloose soils the banks, unless made large, have little effect, and this is in general too expensive. The natives, therefore, endeavour to fortify the bank with a hedge, but owing to carelessness it is seldom of much effect, and the plants commonly chosen for the purpose are very injudiciously selected: they are as follows—

The Jiyol, mentioned among the trees of the district No. 81, is that most usually selected, merely, I believe, on account of the readiness with which it takes root, so that it is at once a kind of fence; but it wants thorns, and any animal may force its way through the hedge that chooses to make a little exertion.

The only other hedge in such situations, that is at all common, is the Bherondo or *Jatropha Curcas*, which is equally ineffectual, and equally easy to raise. The seed is never used for making oil, but the juice is reckoned a good application for sores. This juice seems very different from the milk, that flows from most plants allied to the Bherondo, and which is in general acrid. The clear juice of the Bherondo possesses little of that quality, but is very viscid; and boys

blow it into bubbles, as an amusement, just as in Europe they blow soap suds.

Two other plants, still less effectual, but very ornamental, are used in the fences of this district, and are raised from seed. The one is the Joyonti, or *Sesban egyptiacus* of the Encyclopédie. It is very ornamental, and grows very fast. Its wood is useful for fuel, and for constructing the roofs of huts.

The other I have seen only in this district, where it is called Borojhinggu. It is perhaps still more ornamental than the *Sesban*, and is applied to the same uses. In the writings of botanists I have not been able to trace any account of this plant, which is a species of *Robinia*.

There are four thorny plants, that are occasionally found in the hedges of this country, which would make good fences, and which do not harbour vermin, nor stop ventilation; but the natives seem to have some aversion to them. The thorns are probably inconvenient to people with naked feet. The first is the Phonimonsa, a species of *cactus*, of which I can trace no account in botanical systems, and which has been found to be a proper food for a kind of cochineal, as I have detailed in my account of Mysore. The next is the Monsa, a noble kind of *Euphorbium*, called *Neriifolium* by botanists, and which is sacred to Bishohori, the goddess of serpents. The third is the Patasij, a *Euphorbium*, not yet described, resembling the former a good deal, although not so fine a plant. The fourth is the Narasij, or *Euphorbium antiquorum*, a very fine plant, which, with a little care, makes an excellent fence in any soil. Except the houses and gardens, nearly the whole country is open. Some little care, however, is bestowed on rich crops, especially on the Mulberry, everywhere, and on the cotton in clay lands, which are always surrounded by a bank of earth, that is a sufficient fence even in lands of a loose soil. If this were extended to all the higher lands, the expense would not be great, were the fields of considerable dimensions: but where most farms do not exceed five acres, and where twenty things are cultivated in that extent, subdivisions would be intolerable. A cultivator of Mulberry, near Maldeh, estimated the forming such a fence in loose soil at 2 rs. for 480 feet. The annual expense is one-half of the prime cost. This, however, is a man's wages for

40 days, and, I am persuaded, is over-rated. The common estimate in cotton lands of a stiff clay, which are all enclosed in the same manner, is 12 days work for a man to enclose half an acre, or 600 feet, and 6 days to keep it in repair.

When a spot is cultivated with capsicum, or any other rich crop, it is generally surrounded by a hedge of dry bushes, and the fields of sugar-cane are surrounded by a row of Oror (*Cytisus Cajan*). The seed is sown when the field is planted, and by the time that the canes become a temptation to cattle, the Oror has grown, and keeps off slight attempts at intrusion, besides producing a considerable quantity of an excellent pulse. It is, however, totally incapable of turning the wild hog, which is the most dangerous enemy to the cane.

I have already mentioned the great expense that is required to tend the Kine of this district, to which must be added the trouble of tending the horses, goats, sheep, and hogs, and the still greater trouble and expense which attends the watching of the growing crops by night, to keep off wild hogs and buffaloes, and with which a great many of the labourers are constantly harassed. The whole expense, however, thus bestowed is very ineffectual, and a very great loss is suffered both from tame and wild animals. It may, indeed, be safely said, that the natives, in this respect, are very bad neighbours, and too often seize an opportunity of allowing their cattle to satiate their ravenous appetites at their neighbours' cost. Fences, which would in a great measure prevent these expenses and losses, are therefore much wanted; but, in the present state of things, I know not how they could be made. The farmers are too poor, and the landlords too careless, to lay out money to any great extent. Perhaps the introduction of the *Euphorbium Tirucalli* might assist. It grows very readily, makes a fine close hedge, and, having no prickles, would be, perhaps, more acceptable to the natives than the prickly plants of the same kind. Besides, its cuttings, trodden into the mud of low rice lands, form an excellent manure, and it grows on any soil that is not inundated. The finest fences that I have seen in India are formed of this plant, which preserves a freshness and moisture in the most scorching winds.

FARMS.*—It is said, that in most parts of this district, Mr. Hatch introduced a regulation, by which the size of farms is restricted not to exceed 50 bigahs. At any rate the people every where almost said, that there is such a regulation, and therefore often concealed the real extent of their farms. I have not heard the reasons that were assigned for this restriction, although it was probably with a view either of doing away the manner of cultivation by sharing the crop, or from some scheme of equalizing property. It may have also been made in consequence of representations from the landlords, who pretend, that large farmers neglect their lands. Neither do I know certainly whether or not such a regulation exists; for the land holders may hold out a pretence of that nature, in order to render the large farmers more dependent on them, by granting them leases, that they imagine are not strictly legal.

With whatever view it was framed, or alleged to be framed, I have no doubt in stating, that the observance of such a regulation would be highly injurious both to agriculture, and to the labourer. These people, who cultivate land for a share of the produce, are in a better state than common labourers, and must fall to that level, unless they are employed as at present; for they have not stock sufficient to enable them to cultivate without assistance. Besides the reducing farms to 50 bigahs would compel every rich man to give up agriculture, and to remove his stock to some other employment, which of all other circumstances would be that most destructive. Indeed the quantity of stock belonging to actual farmers is already a great deal too small, and the observance of this regulation would go near to banish it altogether.

Like other useless or pernicious regulations, however, this is constantly evaded, and leases for 50 bigahs each are granted to 5 or 6 persons of the same family, it being understood, that the whole belongs to the principal person. The actual size of the farms is very various. I have already stated, that the usual extent, which can be cultivated by one plough, is 10 large bigahs, or 50 Calcutta bigahs, or 5 acres, but many persons rent a much smaller extent. These are chiefly tradesmen, who wish to have as much rice as will maintain their families for some time before harvest, when traders take advantage of the demand, and usually raise their grain to an immoderate price. These tradesmen do not cultivate the fields themselves, but employ people to do it for a share. The people also, who engage in this cultivation for a share, have in general 2 or 3 bigahs, for which they pay rent, and employ their leisure time in cultivating land for their neighbours for one half of the produce, on which account they are called Adhiyars, or half people.

About a half of the farmers, or those who rent lands and follow no trade, have one or two ploughs, and seldom employ servants. The head of the family and a son or brother hold the ploughs; only, if there is no boy in the family, one must be hired to tend the cattle. If the farm is not quite large enough to employ their ploughs the whole year, they cultivate somewhat additional for a share of the produce; and, if it is of a clay soil, which occupies the farmer only 6 months in the year, they hire themselves out as day labourers to those who cultivate free soils, or as porters or labourers to merchants and manufacturers of sugar and indigo. Middling farmers who have 3, 4 or 5 ploughs, form perhaps 7-16ths of the whole. These are not exempt from holding the plough, but hire in servants to make up the deficiencies on the number of labourers, that may be in their families, that is to say always one man for each plough, with a number of boys sufficient to take care of the cattle. Where the soil is

* In consequence of the importance of the landed tenures in India, I am induced to give this section at length.—[ED.]

free, and produces a variety of crops, especially sugar cane, more men are required at some seasons of the year, particularly in the cold season, when there is nothing to do in the clay lands. Persons of this kind never hire themselves as labourers; but those who live on a clay soil employ the 6 idle months in purchasing rice, and carrying it to the marts, by which they have considerable profit. Those who live on a free soil have neither leisure nor cattle to spare for the purpose, and must sell their grain to their neighbours. The profits on this kind of traffic seem to be considerable, and it is owing partly to this, in all probability, that the farmers are richer on clay lands, that produce nothing except rice, than those who occupy the richest lands in the district.

About one farmer in 16 may rent from 30 to 100 acres. These seldom labour with their own hands, but keep as many ploughs as they have dependent relations, or hire two or three additional men. The remainder of their lands they give to people who cultivate it for a share. These men have in general large capitals, and advance money or grain, both to those who cultivate for a share, and to their other necessitous neighbours, to enable them to live, while the cultivation is going forward. It may indeed be said, that their stock carries on at least one half of the whole cultivation of the country. Most of the Adhiyars and small farmers are more indebted to them than the whole value of their stock, and for six months in the year would starve, did not the wealthy farmers advance them grain to eat. It is they who even furnish the seed; so that whenever one of them is discontented, he gives up his farm, and retires with all his dependents to some other estate, where there are waste lands, which his stock enables him to clear. The village, which he left, is then for some years unoccupied, until the landlord can find a fugitive of the same kind; and in general must use a good deal of solicitation, before he can induce the farmer with his dependents to settle. On this account the landlords do not like this class of men; but it is evident, that they are absolutely necessary; unless the landlords themselves would advance money to their necessitous tenantry. In a few places I heard, that this is done, but it is only practicable to advantage on very small estates, and the having large farmers, who are able to supply the stock, is a vast advantage to all persons, that have estates of a respectable size. It is true, that these large farmers exact enormous profits for whatever they advance to their necessitous dependent; but still they are of infinite use to these people, who without their assistance would be instantly reduced to the state of common labourers, and often to beggary. It must also be considered, that the risk of advancing is great, where there is very little inclination among the people to discharge their fair debts. A clamour however, as usual, has gone abroad against the wealthy farmers, who are considered as mere flayers of the poor, and no people privately join more earnestly in the cry than the landlords. In public however they court the wealthy farmers, and it is alleged often purchase their assistance to enable them to fleece the poorer tenantry. A landlord or his agent assembles his people, and states, that he is in want of money to build a house, to perform a pilgrimage, to celebrate some holiday, to marry a son or a daughter, or to alleviate the pecuniary distress in which he is involved, and solicits the assistance of his tenantry. The rich farmers have been previously gained, and give their consent to a general assessment, and the others follow their example, rather than quarrel with people on whom they depend; but it is the poor only who pay. By this mean rapacity the landlord always renders himself more dependent on these farmers, as he squeezes from his other tenantry, what might enable them in time to cultivate with their own stock.

It must be observed, that the wants of the smaller farmers, and of those who cultivate for a share, does not originate from the large farmers. It

may perhaps have sometimes been owing to the exactions made by landlords; but in most cases it has arisen from their own imprudence in spending on marriages or other ceremonies, the means that were absolutely necessary for their independent existence; and in this country the rate of interest is so high, that when once a person is involved, nothing but some very fortunate accident can possibly relieve him. He receives the rice, that is necessary for seed, or for his maintenance, at the high rate, which prevails for six months before the harvest, and he must pay it back at the low rate which is put upon it, when the market is glutted by every necessitous creature bringing his corn for sale, the moment that it has been beaten from the straw. He lives in tolerable plenty for six or seven months, and then is reduced to the same straits as before, and is again necessitated to borrow rice on as disadvantageous terms as formerly. The interest often therefore appears moderate enough; but the manner of payment renders the loss enormous.

I have already stated, that the lands now occupied in the district, exclusive of houses and gardens, amount to some what above 71,94,000 bigahs. Of these perhaps 194,000 may be reserved in the occupation of the proprietors, who cultivate them by their servants, or by those who take a share. The lands thus occupied chiefly belong to petty Zemindars, or to the proprietors of small estates that are not taxed. Of the 700,000 remaining Bigahs perhaps 40,000 are occupied by tradesmen, and poor people who have not a sufficient quantity of land to employ one plough; the remaining 660,000 may be occupied as follows:—

6,600 principal farmers at 165 bigahs on an average 10,89,000 rs.; 8,800 great farmers at 75 bigahs, 6,50,000 rs.; 11,000 comfortable farmers at 60 bigahs, 6,60,000 rs.; 19,800 easy farmers at 45 bigahs, 8,91,000 rs.; 55,000 poor farmers at 30 do. 16,50,000 rs.; 1,10,000 needy farmers, at 15 do. 16,50,000 rs.; total, 66,00,000 rs.

I have already mentioned the stock of implements, that is proper for a farm of one plough, to be 3¼ rs.; but in farms of one plough, or when a man cultivates for a share, the hatchet is generally omitted, and in larger farms one Dhengki and one hatchet is sufficient for the whole, so that the average rate cannot be reckoned at more than 2¾ rs.; Then two oxen for the plough are six rs. 1 cow, 3 rs. seed on an average 20 sers of rice for a bigah. This is furnished to the necessitous at double the harvest price, but this exaction ought not to be charged to the expense of stock. I therefore take it at the proper price, or suppose that the farmer brings it with him, at this rate the seed for each plough, reckoning the average price of rice at 90 sers for the rupee, will be 3 rupees 5 anas 4 pice, thus then a farmer on each plough ought to have at least, implements, 2 rupees 12 anas; cattle, 9 rupees; seed, 3 rupees 6 anas; house, 5 rs.; furniture, 3 rs. 4 anas; clothing and ornaments, 4 rs.; food for six months until his first crops are fit for use at 2½ rs. 15 rs.; rent for six months at 10 anas a year, 4 rs. 11 anas; total, 47 rs. 1 ana.

Rich farmers generally have higher priced cattle, but their expenses for houses, food &c. do not increase in proportion, Thus a farmer having 4 ploughs cannot expend 10 rs, a month for food. The quantity of stock, required for rich land of a free soil, differs very little from what is required for a stiff clay; but this does not render the situation of the farmer on the loose soil more comfortable; for he must labour or keep servants the whole year, while the farmer in the clay lands keeps servants six months in the year only, and in the other six may employ himself and cattle to great advantage, if poor as a labourer, and if rich as a trader, and in fact, as I have frequently mentioned, the richest farmers are those on clay lands, who rear little or nothing except rice. This however does not proceed entirely from their farms being of a more profitable nature, but in some

measure also from necessity. The merchants are not so eager to purchase their produce, as they are the sugar and silk raised on the richer lands, and therefore they do not so readily receive advances; consequently the inconsiderate have not the same facility in anticipating the returns of their farms, which is the general source of the wretched poverty, that prevails in this country.

I have already mentioned, that the greater part of this stock is borrowed; and on grain farms is advanced chiefly by the principal farmers before mentioned, many of whom have capitals of from 5,000 to 20,000 rs, but perhaps 5,000 may be about the average. Much also is advanced by merchants who reside between Moorshedabad and Calcutta both included, who annually purchase about 40,00,000 rs. worth of rice in this district, and make advances for a part. The agents of Zemindars in general allege, that small tenants, who cultivate with their own hands, have their farms in best order. This however may be doubted, as the agents have an interest in employing such people alone; for these are the men with whom agents can take the greatest liberty.

When the settlement of the company's revenue was made, Mr. Hatch, who valued the greater part of this district, seems to have proceeded on a general estimate of the lands of each pergunah, and for that purpose he seems to have divided them into two kinds, one that produced two crops, and the other which produced only one, and the rent of the one was usually considered as double that of the other. This may have answered his purpose sufficiently well; both for ascertaining the real value of the district and for fixing a maximum of rent beyond which those who were then in possession of the lands could not be desired to pay; but his mode of valuing estates by a general average has usually been followed by the proprietors, and both they and the farmers pretend, that they are bound to let their estates at no higher rate. This it is said is not strictly true, and would be a great absurdity. Every one must be sensible, that much land which gives one crop only is more valuable than a great deal that gives two, and the only rational way, in which land can be let, is by valuing each farm. The Zemindars however have probably adopted Mr. Hatch's plan, as a means of checking fraud in their servants and agents; for few of them manage their own estates. The usual plan therefore employed by the agents is to state a certain portion of each farm as land producing two crops (Poli) and a certain part as land producing one crop (Khyar), so as to make the amount, at the valuation which Mr. Hatch took, equal to the rent, which the farmer is to pay. This indeed, seems to be the best mode, which could have been adopted, as there are very numerous objections to the only other way that I have seen used in such cases, which is to give each man a share of all the different soils in the estate in proportion to the extent of his farm. This manner of checking their agents in the letting farms, by means that were intended for other purposes, has been in some instances attended with considerable loss to the proprietors. Where there is a great extent of poor land it cannot be brought into the neighbouring farms, even at the lowest rate of average rent; and is therefore unavoidably out of lease, and is only occupied occasionally, in which case the landlord, who resides at a distance, seldom receives any rent.

The avowed rent, so far as I could judge, seemed to be in general less than one fourth part of the produce, except on lands that produce rich crops, especially sugar-cane. On the whole, however, one fourth of the produce ought not greatly to exceed the actual rent, for the houses and yards are always rented at the highest rate of arable land, and sometimes even at more, and yet produce nothing. The rent is always paid in money. The usual time of entry is in the two months of spring, from the twelfth

of March to the twelfth of May. During these months no rent is paid; but in the month that precedes, and in that which follows the term of entry, 1-6th. of the rent is paid; and in each of the other 8 months 1-12th. is due.

In almost every part of the district the leases are granted in perpetuity, and the tenants will not accept of any other. In some places they even pretend to a right of perpetual possession at the usual rate of rent, if they have occupied a farm for ten years. This is probably one of the greatest bars to industry and improvement, that can take place in any country; as the landlord has no inducement to lay out money in improvement, or indeed to attend to the condition of his estate, farther than to get his rent as easily as possible. It may indeed be safely said, that a gradual and moderate rise of rent is the grand source of wealth and prosperity to every country, and the additional exertions which are required from the tenant always, I believe, have turned out still more for his benefit, than for that of the landlord. The proprietors of small free estates, who neither pay rent nor tax, are a proof, that the condition of the peasant is improved by paying rent. These lands are miserably neglected, and the wretched owners would just exert themselves so much, as to prevent themselves from perishing of hunger, were they not religious mendicants, who find an additional resource, that keeps them in about as good a condition, as those who cultivate a similar extent of land, that pays rent.

But this perpetual possession, which is so eagerly sought after, is almost nominal; for, so far as I could learn, not one tenant in four resides seven years on the same spot, and the bulk of them are constantly changing from one estate to another. The only advantage attending leases in perpetuity is the encouragement, which it gives to the tenant in forming plantations: but these are formed to much more advantage either by the landlord himself, or by his engaging to pay the value at the expiration of the lease, as is usually practised in Malabar, where the plantations are of much more importance than they are here. Still farther, a particular exemption may be made in favour of plantations, as is done in Mysore, where lands occupied in this manner are the only ones, which can be said to be private property. Poor lands, that are only cultivated occasionally after a fallow, are let for the time, that they are to be occupied, upon whatever terms the parties can agree; and the usual terms are one half of the produce; although the proprietor is sometimes satisfied with a low rent in money.

The whole expense of cultivation of every kind cannot be reckoned at more than one half of the produce, even on lands, that produce only ordinary crops; as men can be procured, who will cultivate it on these terms, and who live better than common labourers. These persons seldom cultivate the lands, that produce the richer crops, which are generally reserved by the farmers for their own use. For the sake of round numbers, I shall take the rent at one fourth of the produce, the farmers therefore have at least one fourth of the gross produce of the lands as clear profit, besides the profit, which they have from the milk of their cattle, and from their plantations. Now the gross produce of the cultivated lands being 20,000000 rs., their profit from the lands is 50,00000, while the whole value of the milk procured from farmers' cows has been estimated at 12,00000, and in all probability this is exaggerated. The greater part of this, however, should be considered as the value of the rice straw and bran, on which the cattle feed, and which have not been brought in to the accompt. But in fact, so far as I could find on investigation, the avowed rent does not amount to one fourth of the produce, even excluding milk, bamboos and mangos, all articles of considerable value. Although therefore imprudence, or too great a compliance with custom may have involved the farmers in debt, the interest of which consumes a great part of the above sum, the profits of the occupation are no less certain.

It is indeed alleged by the farmers, that their poverty is not owing to an imprudent anticipation of their produce; but has arisen from the rapacity of their landlords, who exact much more from them than the rent mentioned in their leases. I have already explained the manner in which, I believe, almost every landholder, and almost every individual employed under them, as far as the extent of their jurisdiction goes, beg money from the poor farmers; and, so far as it is voluntarily given, there can be no right in indifferent persons to check the practice, farther than by reprehending it as a mean custom, of which every landholder should be ashamed. The landlord, however, were he not tied down by perpetual leases, would have the most evident interest, and most indubitable right to prevent his dependents from taking a farthing; for the richer his tenants were, the more rent they would be able to pay. At present it is totally indifferent to him what their condition is, so long as they do not run away. The poorer farmers indeed very universally complain, that they pay a great deal more than their rent, partly from fear of giving offence, and partly from mere force or fraud. They allege, that unfair receipts for their payments are given, few of them being able to read; and in order to defray every kind of extraordinary expense, which the landholder or his agents can incur, that money is levied from them by confinement, and even sometimes by blows. The apparent expenses of the agents being much greater than their avowed allowances, leaves no room to doubt of their being in general rogues; but whether their profits arise from oppressing the farmers, or from joining them to cheat their masters, can be determined by those only who have judicial authority to investigate the matter. I am however inclined to believe, that the landlords suffer more than the farmers; because, when I recommended an application to the courts of justice, to most of those from whom I heard complaints, the universal answer was, that there was no justice for a poor man against a rich, and that the rich farmers were never molested. A complaint of such a general nature being certainly false makes me doubt of the truth of a great part of the others. It must however be stated, that the vast number of men employed in collecting the rent, which far exceeds any thing, that can be supposed necessary for the mere conveyance of messages, leads to a suspicion of force being some times employed; and in one place I had sufficient evidence, that the agent of a landlord had stocks in his office, which could only be employed for illicit purposes. Besides the general manner, in which the agents spoke of the farmers, convinced me, that they considered them as subjects, to whom they had a right to dictate law; and that this right was an excuse for whatever hardships they might choose to inflict.

The most common means of injuring the farmers, however, is I believe, by giving them receipts for less money than they pay, which ignorance prevents them from detecting. When the time for a final settlement comes, they find that they are in arrears two or three rupees more than they expected, and must either pay this balance, or allow their effects to be sold.

The process for the recovery of rent is so easy and expeditious, that the landlord or his agents have no excuse for the employment of arbitrary power, which can only be considered in the light of robbery; and the frauds committed in granting improper receipts, or in suing farmers for more than is actually due, in confidence of their not being able to procure redress can be considered as no less culpable; and fine, which is I believe, the only punishment that can be inflicted for such offences, seems inadequate to the atrocity of their nature. As the detection of the crime is difficult, transportation beyond the seas for seven years, accompanied of course by loss of caste, could not be considered as too severe, and would probably be effectual.

If what the farmers allege has any foundation in truth, it would be also necessary to secure them in their proffers of payment being valid. If when they offered payment a receipt for the sum was refused, without an enormous deduction for light money, they should have a right to deposit the money in the hands of the Munsuf, whose receipt for it should be good to them, and whose commission and fees should of course come entirely from the person who refused the payment. At present, a farmer who does not agree to the terms proposed may be refused a receipt, and his rent being unpaid, a complaint may be made and all the expense will come to him. This is so heavy, that in general it is better for him to comply with the original demand. Such at least is what they allege. The principal means that occur to me as likely to improve the agriculture of the country, so far as relates to the tenure of the farms, are the following:—

First, To encourage as far as possible, large farmers from whom a landlord may collect his rent without the assistance of an army, and whom his agents cannot pretend to fleece.

Secondly, To enforce the regulation that prohibits the granting leases in perpetuity, which is now almost universally adopted, and which is not only injurious to agriculture, but might in a great measure annihilate the landed revenue.

Thirdly, To secure the farmers from every kind of demand, except those contained in their leases.

Fourthly, To introduce a greater spirit of independence among the farmers, by discouraging as far as possible the system of advances. This it is evident must be a work of time, as the present cultivators have not stock, and must borrow it. All that can therefore be done is, if possible, to check gradually the profits on such loans, by which means the money advanced will be gradually applied to other purposes, and necessity will gradually compel the farmers to save stock until they procure a sufficience. I am aware, that some able economists condemn all restraint on the rate of interest, and contend, that no one will borrow or lend except when it is for his advantage. I cannot here enter into a discussion of this matter, the determination of which must in a great measure depend upon the definition that is given of the word advantage. The state of capital in this district will I imagine, show, that were the usual rate of interest is higher than the ordinary gains of commerce or agriculture, the common prudence of mankind is not sufficient to prevent the rich from being tempted to lend upon very bad security, nor to hinder the poor from indulging their propensities by borrowing money on terms which nothing but mere accident can ever enable them to repay. The consequence is, that the rich man, in place of a capital which can be realized, acquires a number of necessitous dependents, to whose wants he must administer in order to procure a share of their labour in place of interest, and these dependents are reduced to perhaps one of the worst kinds of slavery, that of insolvent debtors.

Fifthly, Each Munsuf should have a properly qualified land measurer, liable to severe punishment if detected in fraud. On application from either landlord or tenant this man should measure the field, and be paid by the person at whose request the measurement is made; and no other measurement should be admitted, except by order of the magistrate, on complaint of fraud or corruption in the public measurer.

I shall now give a few of the many statements of their profit and loss, which I received from actual farmers. I have selected one from each kind of land.

In Pergunah Devikoth a grain farm was cultivated by five ploughs, and contained 55 bigahs of land of a free soil; the bigah contains 84 large cubits, the farm therefore contained about 79½ Calcutta bigahs or 26¼ acres. Two persons of the tenant's family managed two of the ploughs, and three

servants were hired for the others, besides 10 rupees were expended in procuring occasional labourers: 31 bigahs of this farm were called Polli, as follows—

1 bigah for house and garden, no produce; 2 bigahs for raising seedlings no produce; 28 bigahs sown with summer rice, at 12 *mans* Calcutta weight the bigah, at 3 *mans* the rupee, 112 rs.; 20 of these bigahs produced Sorisha, at 2¾ *mans* the bigah, 40 rs.; 7 bigahs produced pulse (Khesari or lentils) at 2¼ *mans* the bigah, value 60 sers the rupee, 10 rs. 8 anas; 1 bigah tobacco, 5 rs.; 24 bigahs were reckoned Khyar, each gave 15 *mans* of winter rice, 120 rs.; Total, 55 bigahs=287 rs. 8 anas.

This produce of what was cultivated with grain is nearly 3¾ rs. a Calcutta bigah, which is 1 r. more than my general estimate; but then the land is a rich free soil. The farmer said, that he paid 70 rs. rent, and 8¾ rs. for extra demands. This is almost 16 anas for the bigah, while I allow only 10; but then the land is richer than the average. Deducting one-half the produce for expense of cultivation, there will remain 144 rs. 4 anas, and the rent exceeds the half of this by 6 rs. 6 anas; but the man puts no value on his garden, nor on the crop which he has from the lands reserved for seedlings, and which in such soils always gives a good crop. This will nearly make up the difference. Deduct rent and half of the produce, there remains 55 rs. or 11 rs. neat on each plough. A farmer of Pergunah Kordaho cultivates 40 bigahs of a stiff clay, and keeps four ploughs. He has two men in the family, and hires two servants for six months. The bigah is nearly equal to ½ acre or 1½ Calcutta bigah, in all 60 Calcutta bigahs.

4 bigahs reserved for house, garden and seedlings, no produce; 10 bigahs produce 18 *mans* of winter rice, Calcutta measure, at 120 sers the rupee, 60 rs.; 10 bigahs produce 15 *mans* each, 50 rs.; 10 bigahs produce 9 *mans* each, 30 rs.; 6 bigahs produce 12 *mans* of summer rice each, 24 rs.; 144 sers of Sorisha, at 48 sers, 18 rs.; 300 sers of Khesari, at 60 sers, 5 rs.; Total, 40 bigahs=187 rs.

The produce of the 54 Calcutta bigahs of arable land is therefore 3 rs. 10 anas, also above my estimate. Deducting one-half of the produce for the expense of cultivation, the rent, which appeared on the face of the lease to be one rupee for each bigah without any deduction for seedlings, did not amount to one-half of the neat proceeds by 13 rs. 8 anas, out of 93 rs. 8 anas; but the farmer alleged, that the exactions amounted to one-half of the rent, in which case it would exceed the half of the neat produce by 13 rs. 4 anas. I have, however, already stated my doubts concerning the reality of such exactions, at least to so great an amount. The man ought also to have allowed some produce for his garden, and probably a little for his seedling-land, as the soil was rather rich. The rent, making a reasonable allowance for seedlings, is at the rate of nearly 10 anas for the whole, or about 11 1-3 anas a bigah for what is actually cultivated. Deducting one-half for cultivation and the rent, with a moderate allowance for extra charges, the gain on each plough will be nearly the same as in the former case.

A sugar-cane farmer of Lalvari Pergunah, who has three ploughs, cultivates 30 bigahs of land, the bigah consisting of 56 yards (Guz); but about four are deducted from each bigah, by the measurers tying the rope round their middle; the farm may therefore be about 45 Calcutta bigahs or 15 acres.

3 bigahs sugar-cane land; 1 bigah of cane, cut at 18 *mans* (of 96 s. w. the ser=Calcutta *mans* 21 rs. 24 anas) of extract of sugar-cane, at 2 rs. the *man*, 36 rs.; 2 bigahs of summer rice, at 15 *mans*, 10 rs.; 108 sers Sorisha, 2 rs.; 60 sers Khesari, 1 r.; 17 bigahs corn land; 17 summer rice at 15 *mans* value one-third of a rupee, 75 rs.; 5 of it only produce a

second crop of Sorisha, 10 rs.; 2 bigahs for house, garden and seedlings, produce of tobacco, 5 rs.; 22 called Polli, 8 called Khyar, produce each 10½ *mans* of winter rice, 24 rs. 8 anas; Total 163 rs. 8 anas. The rent for Polli land at 2 rs.=44 rs.; ditto for Khayar at 1 r.=8rs.; Total, 52 rs.

This is almost one-third of the produce, but in such rich land one-half of the produce is too much to allow for the expense of cultivation. Deduct however, one-half and the rent, and the remainder will be 29 rs. 12 anas, or 9 rs. 14 anas neat on each plough. On sugar farms the statements, which I have procured from the farmers, generally make the avowed rent about one-third of the produce, on corn farms one-fourth. The alleged exactions would generally reduce both to nearly one-half.

Having now stated what I observed concerning farms and farmers, I shall give an account of those who have no lands, but cultivate on account of others. These people may be divided into two classes, the Adhiyars who cultivate with their own stock, and the Krishan who are servants hired by the month. To those who have visited parts of India where the soil belongs to the sovereign, and is cultivated on his account by persons who give one-half of the produce to the state, it may seem wonderful, that the persons in Bengal who cultivate on the same tenure, should be exceedingly poor. In these other countries the cultivators are at least as wealthy as the farmers of Bengal, and no one can pretend that their soil is more productive, or requires less trouble and expense in the cultivation. Their wealth is to be accounted for in two ways. In the first place they have more prudence, industry, and skill, owing probably to advances being less frequent; but this difference is not very great. The second circumstance, which chiefly contributes to their gain, is, that in these parts the produce of the cultivators labour is divided between him and the state, which is always grossly cheated; and in Bengal the produce is divided between the farmer and cultivator, and each takes his fair share. The condition of an Adhiyar, however, was everywhere represented as better than that of a common labourer. We may state his profit and loss as follows, allowing that each family has one plough.

Profits.—15 bigahs cultivated with grain produce on an average, 41 rs. 4 anas, of which one-half is his share, 20rs. 10 anas; his farm occupies him six months; holydays and sickness two months; he works four months for hire, at 1½ r., 6 rs.; his wife works about the same time as he does, only much harder, by cleaning rice as I have mentioned, 7 rs. 12 anas; by spinning, 4 anas a month, 2 rs. 8 anas; Total, 36 rs. 14 anas. *Charge.*—A boy to tend his cattle, 4 anas; seed, 3 rs. 6 anas; interest on 36 rs. stock (he has no cow) at 24 per cent. including all advantages taken of his distress, 10 rs; Total, 13 rs. 10 anas.

So that he has remaining 23 rs. 2 anas, a very little more than the expense of the lowest class, mentioned in my account of the manner in which the people live. A considerable part of this poverty is however, owing to their having anticipated their returns, and a man who had the the small stock of 36 rupees, might live in this manner without being in absolute want. That is, he and his wife might clear 30 rupees a year. The number of Adhiyars is very considerable; but varies much in different parts of the country. It is probable however, that there are above 150,000 families employed entirely in this manner.

The Krishan, or servants commonly employed in agriculture, are by no means numerous, and do not amount to above 80,000 families; for the families of the greater farmers are generally numerous, and all the sons and brothers hold the plough, while hired servants are only engaged to make up the number, and those who have large farms often prefer the people who cultivate for a share. It is only the heads of the families belonging to the 16,500 large farms that are exempted from personal labour. The Krishan,

in lands that produce a constant succession of crops, are hired for the whole year; but in clay farms they are engaged for six months only. This however, makes little difference; as in the months, when agriculture is at a stop there, the demand for workmen is great, and they can make rather more than in the season of cultivation. The usual wages are 8 anas a month, with food and clothing, which the farmers estimate at 1 rupee a month, but in fact does not exceed 12 anas. The 8 anas go to maintain his wife and family, who are very poorly supported; but the servant is tolerably well provided, as the farmer is interested to enable him to work He usually works about five hours in the forenoon at the plough, and two or three in the afternoon weeding or hoeing, so that his labour is moderate; but at his spare hours he repairs his hut and brings fuel. The gains and expense of his family may be as follows:—

Gains.—To the man's wages, 6 rs.; to the woman's beating rice, 7 rs. 12 anas; to do spinning, 2 rs. 8 anas; total 16 rs. 4 anas expense of a family of the lowest order 22 rs. 11 anas; deducting man's clothing, 10 anas; food one-third of the whole, 5 rs. 8 anas 9 pice; Total, 16 rs. 8 anas 3 pice.

In the expense of these two kinds of labourers, I have only supposed two small children in each family; because the women are so hardly wrought, that they do not breed fast, and before a woman has more than two children, the eldest is usually eight years old. At that age the boys of these two classes begin to tend cattle, and each can take care of 25 head, for each of which they get 3 anas a year, with a meal from every proprietor in turns. The girls can then assist their mothers in beating rice, but are generally very soon married. This class of people live not only very miserably, but at the celebration of marriages and other ceremonies, are generally so inconsiderate, as to run into debt as much as possible. The only means which they have of extricating themselves, is by running away or stealing, and it is alleged, that they are much addicted to both practices. It must however, be observed, that many of those who have been convicted of the last mentioned offence, have been men who had not the excuse of want to plead in their behalf.

The inconsiderate manner, in which the natives of this district anticipate their revenue, may be well exemplified by a common custom of the Krishans in the divisions of Hawora and Rajarampoor. A young labourer, usually in order to defray the expense of his marriage, bound himself to a master for from sixteen to twenty-four months, and received in advance the whole of his wages, which was immediately spent on the ceremony. For the first sixteen or twenty-four months the wife provided for herself, in the best manner she could; but, if she happened to be sick, or to have a child, her misery became extreme, and recourse was had to still farther anticipations of the wages, which were always made at an enormous interest, and of course the family always continued in debt, and the extremity of wretchedness. Some indigo manufacturers, having settled in the vicinity, wanted labourers, and gave 2 rs. a month for wages, which has relieved the poor Krishans from much of their distress, and compelled the farmers to allow them one rupee a month besides their food, and this it is evident, if they are prudent, will render their situation very comfortable. From the present state of husbandry requiring snch a number of people to cultivate the ground, it must be observed, notwithstanding the immense population, that labourers or servants of any kind are difficult to procure in this district, and in travelling through it, except with the assistance of the landholders, who obtained men from their dependents, I could not in any place hire 40 porters to go to the next stage, although double the highest wages were offered before they set out. The number of slaves is very small. Some rich Muhammedan farmers said, that in the last famines, some children had been purchased in order rather to keep them

from starving than with a view to profit. These have turned out very ill, and were so idle and careless, that their labour became much more costly than that of hired servants. Some landholders have a few slaves as domestics. The slaves that are employed in agriculture; and I believe the others, are allowed to marry free women; but as all the children are slaves, the master must pay a high price (5 or 6 rs.) to the girl's parents; the ceremony costs 3 or 4 rs. more.

Estate.—The lands of this district as usual are divided into two kinds, free and assessed (Beza and Juma Zemin). The free lands, which pay no tax to government, have been granted, by various sovereigns, either to different persons who were considered as deserving reward, or in order to maintain establishments that were considered as useful. How far the opinion of their utility is well founded, it is not perhaps necessary to discuss; but there is no doubt, that in the opinion of the people the utility is great, and therefore it is to be regretted, that there is no legal control over the proprietor of the land for the performance of the duty, for which the grant was made. Whether there is no law for the purpose, or whether it has become obsolete, I cannot say; but the practice is to consider these lands as entirely the property of the possessor, who gives whatever part of it he pleases to the establishment, or even sells it altogether. In this district the extent of these lands is not very considerable, as I was informed by the collector's Dewan, that the whole amounted to about 120,000 bigahs of the country, or probable about 180,000, bigahs of the Calcutta measure. It is probable, however, that a considerable extent may have been granted privately, and of course could not appear on the collector's books; and the violent complaints, which I heard from the possessors of free estates, against the new landholders for encroachments on their estates, probably in a great measure originated from the landholders depriving them of all the lands, which they held without right; and it is probable, that they still hold much land, to which they have no title, as it is natural to suppose, that the sacred character, which most of them enjoy, renders people unwilling to disturb them. There is, however, reason to think, that many of the families entitled to these estates have become extinct, and that the landholders have seized on these, and retain them under false names. At least I heard assertions of that nature frequently repeated; but their truth can only be investigated by those possessed of judicial authority. Of right such estates should no doubt revert to the state.

The free estates are in general very small, and the only two of any note are those belonging to the two Muhammedan establishments of Peruya, that have been already mentioned. These are managed much in the same way as the estates of Zemindars; but are much worse cultivated; and the farmers who occupy them, although their rent is rather lower, are at least as poor as their neighbours. The other free estates, which are very numerous and small, are in general in a still more wretched state, and on an average probably one half of each, is waste. This however is not entirely owing to mismanagement; as in general the land is of the very worst quality. The proprietors usually keep a house garden and plantation, and give as much of the remainder to be cultivated for one half of the produce as they can; but those who cultivate in that manner cannot clear wastes, and the proprietors are too necessitous to undertake improvement. The greater part therefore, where the soil is not too poor to produce trees, is over grown with wood. From viewing the state of this kind of property, I am fully convinced, that, if the landed revenue were removed, the country in a hundred years would not be half so well cultivated as at present, and the people would be still poorer.

The assessed lands, as is well known, are in possession of the Zemin-

dars or landholders, who enjoy them by hereditary right and who pay a certain tax, which is considered as fixed for a perpetuity. In fact they have been placed exactly on the footing of the landlords of England, except that the land tax is higher, but then they are exempt from almost all others. At the time, when the settlement was made, it was supposed, that they were only to receive 1-11 part of the net proceeds of their estates, and the Dewan of the collector stated as his opinion, that no Zemindar cleared less than 10 per. cent., and none of the larger Zemindars more than 25 per cent of the neat proceeds. Some smaller ones who could attend to the whole detail of collection, cleared 30 per cent. The few statements in detail, which I was able to procure, agree with this opinion. The following was given as an estimate of the expense and profit of the Raja of Dinajpoor's estate in its now fallen condition. He is a boy of about eleven years of age, and lives with his mother by adoption, who has purchased 8 lots of her husband's estate. He retains only one Pergunah of the immense estate that formerly belonged to the family, and I have reason to believe, that it is the worst managed in the district.

The eight lots require the following establishment:—1 Dewan, who superintends the whole, 1200 rs.; 8 Tohisildors, or assistants, at 25 per mensem, 2400 rs.; 40 writers (Mohurers), at 8 rs. per mensem, 3840 rs.; 24 Sirdars, or officers of the old militia, at 50 bigahs, 1200 bigahs; 16 Mirdhas, or inferior officers of the same, at 30 bigahs, 480 bigahs; 200 Payiks, or soldiers of the same, at 20 bigahs, 4000 bigahs; 8 Duffadars, or officers of a more recent militia, 384 rs.; 24 Burkandaj, the soldiers under these, 864 rs.; 16 Dufturis, or keepers of papers, 192 bigahs; 200 Kutwals, or messengers, 2000 bigahs—total bigahs, 7872—total rupees, 8688; bigahs of land 7872, at 10 anas, 4924 rs. The whole is let to Izaradars, or renters, who receive 4 per cent. commission on the rental, which is 110,000, besides the unrented land, which I cannot estimate, 4400 rs.; land-tax, 79,000—total, 97,012 rupees; rental, 110,000; lands given to domestic servants, 4924—gross amount, 114,924—charges, 97,012—clear income, 17,912. The gain here is about 15¼ per cent. on the gross rental. The expense of collection is not quite 16 per cent. besides the lands not rented.

Now, with regard to the Pergunah that has not been sold, the following is the account which I received:—1 deputy of the Dewan, 280 rs.; 1 accomptant (Juma Nabis), 360; 7 writers, 840; 1 officer of the more recent militia, 48; 7 armed men of the same, 252; 3 Dufturis, or keepers of papers, 36 bigahs; 4 officers of the old militia, 200; 100 soldiers of the same, 2000; 150 messengers, 1500; 3736 Bigahs of land given to persons employed in the collections at 10 anas, 2335 rs.; farmed at 4 per cent. on the rental of 96,582 rs., 3863 rs. 4 anas—total, 7978 rupees 4 anas; land-tax, 81,591 rs.—total, 89,569 rupees 4 anas; rental of the lands, 96,584 rs.; lands granted to persons employed in collection, 2335; lands granted to domestics, 1210 bigahs at 10 anas, 756 rs.—gross rental, 99,675 rupees—deduct charges, 89,569 rupees 4 anas—net profit, 10,105 rupees 12 anas. The gain here is about 10 per cent.; the expense of the collection not quite so much.

I shall now give an account of the management of a small estate belonging to Odwait Chaudhuri, a merchant, who has purchased a lot in the division of Thakurgram, and Pergunah Dehotto, the gross rental 6300 rs. a year. He does not reside, and has the following establishment:—1 Zohisildar, or agent, 120 rupees; 1 Jumanabis, or head accomptant, 84; 1 Mohurer, or writer, 36; 1 Potdar, or money-changer, 24; 2 armed men, Burkundaj, 51; 1 Sirdar, or chief Payik, 20 bigahs; 10 Payiks, 120; 7 Messengers, Kutwab, 56—total, 196 bigahs, 315 rupees; 196 bigahs, at 10 anas, 112 rupees, 8 anas; commission on 6300 rupees, at 4 per cent. 252 rupees—total, 679 rupees, 8 anas; rent, 4500 rupees—total charges, 5179 rupees,

8 anas; gross rental, 6300 rupees; expense, 5179 rupees, 8 anas: net profit, 1120 rupees, 8 anas. Here the profit is about 18 per cent., and the expense of collection about 10 per cent. of the gross amount, which is the proper allowance.

From the statements, that I have already made, I cannot see, how such small profits only are gained, without the most gross mismanagement. I have stated the produce of the cultivated lands at 199,60,000 rs. and I every where endeavoured to make my calculation rather moderate. I will deduct 1-40th part for free lands which is a very full allowance, even supposing that the possessors occupy more than what is their right. There will remain 194,61,000 rs. Now I think it cannot be well doubted that the farmers could without just cause of complaint pay a fourth part of the gross produce; and it is indeed in general alleged by them, that they pay more. The gross rental therefore of assessed estates ought not to be much less than 48,45,000 rs.

Although I have no doubt, that with proper care the landlords, without extending or improving the cultivation, and without the least hardship on their tenants, might realize this sum; yet, I do not believe that their rental is so great. From the most minute inquiry at every division I think, that the usual customary rent, on an average, may be taken at 10 anas for the Calcutta bigah. I avoid entering at all into the consideration of irregular exactions, the reality or extent of which I had not the means of ascertaining. Now leaving out the lands, which are only cultivated occasionally, and which do not enter into the (Juma) rental, there are 68,83,200 bigahs fully occupied. Deduct 215,000 for seedlings on clay land, which pay no rent, and there remain 66,68,200; from which deduct 1-40th for free lands, and there remain 65,23,505, which at 10 anas is 40,77,190 rs. 10 anas. To this must be added all rents for fisheries, pasturage of buffaloes, &c.; but these are small, and probably do not exceed 50,000 rs. a year. Call it only 25,000 to make up the odd number, and the very smallest rental, that ought to be admitted should be 41,00,000 rs. always however on the supposition, that the proprietor is not cheated, farther than by having his lands let too low, or under ¼ of the gross produce. At this rate the tenants, exclusive of the milk, bamboos and mangos which are a fair part of the produce of their farms, do not pay one fourth of the produce by 7,45,000 rs. or by 13 per cent. The landholders therefore, after deducting 10 per cent. for the expense of collection, and paying the land tax of 17,50,000 rs. should have to themselves 19,40,000 rs. which is considerably more than 50 per cent. of the net proceeds. I have no doubt, that an active man with a moderate estate would realize that sum without raising the rents above ten anas a bigah, and without taking a single farthing from any tenant more than his due. And I have no doubt, provided he secured them from the frauds of his agents, that he might take one-fourth of the produce from his tenants, not only without oppressing them; but by giving a stimulus to their exertions, so as greatly to improve their condition. As the estates, however, are in general managed, it would be difficult to say what the real profits are. I can scarcely however think, that any of them produces so little as one-fifth of the net proceeds, and some I have no doubt amount fully to one-half, or even exceed this proportion. It is indeed said, that, when the large Zemindary of Dinajpoor was sold, the assessment was divided very unequally on the lots by the native assistants of the collector, who had thus an opportunity of informing their friends, where a valuable bargain was to be found; and that now, while the profits of some purchasers are great, others make little more than what discharges the revenue. Such allegations however must be received with great caution; for in general each landlord pretends that he has no profit, and invents stories of this kind to account for his own situation; for it is perfectly evident, that the general amount

of the assessment cannot consume near ten-elevenths of the clear proceeds, as was supposed, at the time when the settlement was made. A view of the manner, in which the estates are managed will throw some light on the subject.

The greater part of landholders are new men, who have purchased their estates within these few years, and who formerly were either merchants, manufacturers, agents of land holders, or officers of government. These last are not numerous. Those natives, who are not afraid of them, they are called Lotdars, or fellows who have purchased lots and are held in great contempt, while there is a general clamour against their rapacity and injustice. I must however say, that their lands are in general better cultivated, and the appearance of the people not so miserable as on some of the estates, that have belonged to one family for several generations. Of these there are still some in the district, and indeed the Dinajpoor family still retains the largest possessions, which seem of all others to be the worst managed, and their tenants appear to be the poorest. Still however they are much respected; for the people submit with patience to many things, from a power to which they are accustomed, that would grieve them to endure from a person of whom they know nothing, or whom they once remember as their equal. The odium and ridicule thus thrown on the new landholders, probably prevents most of them from living on their estates, and the merchants, traders, and officers of government knowing nothing of country affairs, almost the whole estates of the purchasers of lots are managed by agents, and the check, which the proprietors have adopted to prevent fraud, seems in general, as I have before mentioned, to be taken from the settlement made by Mr. Hatch. They know, that they ought to have a certain number of bigahs in such and such Pergunahs, that these were valued by that gentleman at such a rate, and the agent is expected to account for the amount. I know nothing of the grounds upon which Mr. Hatch went. It is said, that there is no account of them to be found in the collector's office; but it is said, that he estimated three-fourths of the whole district to be cultivated, and the rents have not been since raised, so that I am totally at a loss to account for the assessment having been made so low, especially as the country is said to have been then better cultivated than it now is.

The agents of the Lotdars manage every thing in their own way, but are under the necessity of being very cautious, as their masters are in general men of business, and those who were formerly agents themselves understand country affairs, so that their estates are improving, and are comparatively well managed.

The estates of more ancient families are on another footing. The proprietors are possessed of documents concerning their management for a number of years, and being respected live among the people, to whom they have been known from their infancy. They have therefore great advantages were they disposed to attend to their affairs; but very few of them are men of business. A great part of them never pass the threshold of their door, except to assist at some religious ceremony, and are either sunk in a miserable superstition, a prey to religious mendicants, and other idle persons, or are totally abandoned to dissipation; and some are addicted to both vices. Those are reckoned men of activity and business, who sit in their office a few hours a day, and look a little into the accompts; and once a year go round their estates to receive presents and homage from their tenantry. There are however some honourable exceptions, especially Guruprosad of Surahor Mankoyi, who not only investigates his accompts with care; but, when he suspects fraud, takes the measuring rope in his own hand, and examines on the spot the veracity of his agents. Every

thing about him is decent and respectable, and the estate is like a garden.

On large estates there is a Dewan or chief agent, who resides at the principal office, and has under him a sufficient number of accomptants (Mohurers) the chief of whom (Jumanabis) keeps the rental. There are besides a keeper (Buksi) and valuer (Potdar) of money, people who take care of the papers (Dufturi), and a number of messengers (Kutwal). In order to protect the money, and convey it from place to place, and also, as is alleged, to enforce orders, two kinds of guards are kept. One called Burkundaj, commanded by Dufadars and Jumadars, seem to be a more recent establishment. The other called Pyiks, commanded by Mirdhas and Serdars, are the remains of the militia of the Bengal kingdom. Both seem to have constituted the foot soldiers, whose number makes such a formidable appearance in the Ayeen Akbery. At each large division of the estate (perhaps 20,000 rs. rental) is a deputy (Nayib or Tahisildar) with a similar but smaller establishment. Now so far as we have come the heads of these offices are considered as persons of consequence, who are not to travel through the country, to examine into the affairs of the estate, but sit quietly in the office, to keep the accompts, to receive money and to manage affairs with the officers of government. These principal agents manage the estate in two different manners. They either collect the rent immediately from the tenants; or farm them out for a certain number of years to a kind of middle men called Izaradars.

If the rents are to be levied immediately from the tenants, the head officers employ men to cultivate the unrented land, either for a share of the produce, or for a certain sum from year to year. The rent of the land, that is let on lease, is actually received from the tenants by two persons, a Patoyari and Mondol, of which there should be one Mondol for each Mauza, and one Patoyari for every two or three, unless these be very large. These two officers are in fact the only men employed, who are usually well versed in country affairs. Many landlords have of late discharged the Mondols, and employ only Patoyaris, and this seems to be a judicious saving, and a sign of approaching economy. The Patoyari is a penman, and keeps the accompts, for which he in general receives 3 per cent on the rental; and the Mondol, who in some places is called Prodhan, is the chief farmer of the village, who manages the others, and usually receives 1 per cent. commission. This commission given to the Patoyaris and Mondols is called Surumjani, and sometimes instead of 4 per cent. arises to 6. The Payiks and their officers, and the messengers, are paid in land. The other establishment is paid in money; but most of the domestic servants receive land in place of wages, and this land is not included in the rental, every means possible being taken to make that appear small.

On smaller estates a Nayeb or Tahisildar with his usual establishment are sufficient; but there are very few indeed, in which the landlord manages his own affairs without assistance. If the rents are to be farmed, an agreement is made with the person, named Izaradar, who undertakes to collect the rent, as stated in the rent-roll, and to defray all the expenses of delivering it into the agent's office. For his reward he takes the commission of from 4 to 6 per cent. above stated, and the whole profit that he can derive from the lands which are not rented. He receives also the assistance of all the militia and messengers who continue to receive their lands, and are directed to obey his orders. From three to five years is the usual period, that the lands are rented, and the contract has in no instance been extended beyond nine years. When the commission is high, or the quantity of unrented lands is great, the renter often pays a sum of money in advance The renters are in general perfectly conversant in country

affairs, and make the most of the lands; being totally unconcerned whether the tenants are ruined or not. Indeed where they are rich men, who have much influence, the tenants are uncommonly dissatisfied and clamorous; but, where they rent only small portions of an estate, the tenants complain no more of their condition than usual. Even with this security, and where a land holder receives the whole of his rent from a few Izaradars, who have very good credit, it is not usual for him to diminish his establishment.

These unwieldy establishments seem to have been originally formed, when the government collected the rent immediatly from the farmer or cultivator, and when the same persons managed not only the collections, but the police and a great part of the Judicial department. The vast number of armed men Burkundaj and Payik, especially the latter, formed the infantry of the Mogul government. The whole was continued under the Zemindars, until the perpetual settlement; because they not only collected the revenue, but managed the subordinate parts of the police, and of the administration of justice; and they were anxious to have as many armed men as possible, because these supported them in their enormities, and were no charge, as they lived on lands which the Zemindar did not bring to account. Custom and the artifice of agents keep up the establishment; for I have great reason to think, that most of these people, who are paid in lands, are mere cultivators, and pay a low rent to agents, although on paper they are represented to the landlords as having each from 10 to 50 bigahs free of rent, and to be absolutely necessary to procure the money. Some landlords are now curtailing very much, and every man that can be saved will enable the Zemindar to raise more money from his tenants, as the lowest messenger expects at least subsistence, when he goes on a message to a farmer, and all the others expect presents, and usually obtain them in proportion to their rank. These are avowed, but it is alleged, that they exact much more by violence. The greatest detriment, however, that the landlords suffer, is by the collisions between their agents and farmers, who are allowed to occupy much more land than their leases bear, and pay a bribe rather smaller than the usual rent to the agents, who whenever the tenants are refractory threaten a measurement. The perpetual leases at a low fixed rent are also very favourable to the agents. The people in possession of such more readily submit to impositions, than those would who rented land, at its full value for a short term of years; for such tenants would always go away, if any addition was required, but a man who has a valuable farm in perpetuity, submits to much, in hopes that hereafter he may have a more just agent.

It is not usual for the Zemindars to make advances to the tenants to enable them to cultivate, although of late some have given assistance to those who were bringing in waste ground. This is in some measure excusable; but the practice is commonly very destructive, and encourages the tenantry in the anticipation of their means, which is the fault to which they are most addicted.

Although it appears evident from the Ayeen Akbery, that in the time of Akber there were no hereditary proprietors of land in this part of the country, all the natives allege, that the office of Zemindar has always been hereditary, which may have in some measure been the case. They then merely accounted to government for their receipts; and they pretend to say, that they have been injured by the new settlement. They allege, that formerly they were allowed great authority, both in criminal and civil causes over the people whom they managed, which was a great source of emolument, being of course venally administered; and although they were often squeezed by the Mogul officers, and on all occasions were treated with the utmost contempt, they preferred suffering these evils to the mode

that has been adopted of settling their lands, when they fall in arrears, which is a practice that they cannot endure. Besides bribery went a great way on most occasions; and they allege, that bribes included, they did not actually pay one-half of what they do now, although nothing can be more moderate than the present assessment, which I am convinced does not amount to a tithe of the produce.

The principal things that ought to be inculcated on the landlords, for the improvement of their estates, is activity and industry in the management, and the utility of a suitable education to enable them to perceive, that their estates cannot be improved by beggarly and irregular demands made on the tenantry, but by encouraging those who are frugal and industrious, and by banishing those who are idle and thoughtless. The most bitter enemies of the landlords are idle religious mendicants, who represent all attention to worldly affairs as unworthy of a man; and dissipated flatterers, who represent moderation in expense as unworthy of a great prince, a title that is bestowed by such persons on landholders, who have not 1000 rupees a year.

One of the principal causes, that appear to me to prevent the landholders from acquiring proper habits of activity, and a proper education, is the sub-division of estates in equal shares among all the sons of a family. Where the estates are monstrous, like that of Dinajpoor, and exceed the usual capacity of man to manage, there may be no loss in the sub-division; the inevitable consequence indeed, of mismanagement will always in a short time bring them to sale, and render any precaution unnecessary; but when the estate is moderate, it may be considered as a national loss, when it is broken into portions, none of which can enable the proprietor to bestow a decent education on his children, nor to encourage anything that is ornamental or advantageous to the country. This however is not the greatest evil of the practice. The sons of a family, who know that they all will have a certain provision, naturally give themselves up to sloth, and make no exertion to acquire useful knowledge, even when their parents are willing to bestow it; but the parents even are in general sparing, knowing that their sons can exist without trouble. Now where the custom is to leave the family estate to one son, the parent knows, that the only provision he has for the others is a good and useful education, by which they may be fitted to gain a living suitable to their rank, while the young men must exert themselves, knowing that they have no other resource. Even the son who is to receive the estate, unless he chooses to be the laughing stock of his brothers, must make an exertion sufficient to acquire a knowledge that will enable him at least to superintend his affairs. It is only among young men educated in this manner, that people fit for discharging offices in the police, law or revenue, can be procured. And the manner in which these offices are now in general filled, so far as I can learn, shows that the education of those who hold them has been miserably neglected. Although the Hindu law directs that property should descend to sons equally or at least nearly so, there is nothing, so far as I know, to prevent assessed lands from being considered in a different light; and from being viewed as a trust vested hereditarily in the Zemindar for the security of government, which will be destroyed if the lands are frittered away among the ramifications of a numerous family; and owing to the custom of adoption, these portions never reunite. I am aware that some of the ablest Jurists and writers on political economy are strenuous advocates for the sub-division of landed estates. The speculations of these persons nearly resemble the plan that has been adopted in the colony of the Cape of Good Hope, and I will venture to assert, that this plan has hitherto repressed the progress of agriculture in that colony; and so long as it is in force, will keep that

delightful country in a state of beggary. In fact, it has only been the money spent among the colonists by the Dutch and British fleets and armies, that has prevented them from being clothed in sheep's skins like the Hottentots.

Although, as I have said before, the natives are persuaded that the office of Zemindar has always been hereditary, which is not absolutely incompatible with the idea of its having been merely an office, and totally unconnected with the property of the land; yet from all that I could learn, there is no good reason to think that any families of this district have had very ancient possessions; and it must be observed, that from the total want of history among the Hindus, any custom which has obtained for 100 years, comes to them with its origin as obscure, as if it had obtained for a thousand.

CHAPTER VIII.

STATE OF ARTS AND COMMERCE IN DINAJPOOR.

FINE ARTS.—The style of private edifices that is proper and peculiar to Bengal, consists of a hut with a pent roof constructed of two sloping sides, which meet in a ridge forming the segment of a circle; so that it has a resemblance to a boat when overturned; and is, probably, of the same shape with the Mapalia of the Numidians. This kind of hut, it is said from being peculiar to Bengal, is called by the native Banggolo, a name which has been somewhat altered by Europeans, and applied by them to all their buildings in the cottage style, although none of them have the proper shape, and many of them are excellent brick houses adorned with the forms of Grecian architecture.

Among the natives the poor man has one hut for himself and cattle, and richer men increase the number without altering the plan of the building, and there is no contrivance by which a person can go from one apartment to the other without being exposed to the sun and rain.

Where the materials admit, the walls of the hut are made of mud, and the floor is always raised a foot or two above the level of the plain, but not always so high as to be above water in the rainy season; so that a platform of bamboos is then constructed at one end of the hut, and upon this the family sit and sleep, while they must wade through the mud to reach the door. Where the soil is too loose for making walls, the sides of the hut are formed of hurdles, which are usually made of straw grass or reeds confined between sticks or split bamboos, that are tied together. In the better kind of houses, in place of straw, hurdles made of mats are used, or those of straw are plastered with cow dung and clay, and in doing this the natives display the only neatness that is to be observed in their buildings. The frame of the house usually consists entirely of bamboos tied together. It is only in the houses of very wealthy persons that wooden posts and beams

are used, and these are never either polished or painted, and seldom fastened by nails.

Sometimes the beams support a floor made of clay laid upon bamboos; and in general this is merely intended to lessen the danger from fire, as the floor will give some little time for the people to remove their children and effects. In a very few houses a trap stair leads up to the apartment, or garret above, and it is then inhabited.

The door is in general the only aperture in the hut, crevices excepted, and is usually shut by a hurdle (Jhangp) which is tied to the upper part of the door, and falls down like a valve. Wooden doors, that fold from the side, are only used by the great. There are very few houses that have any openings like windows, to admit air or light.

If the house is intended for a shop, one side of the roof is extended four or five feet beyond the wall, is supported by a row of bamboos, and forms a gallery (Katina or Osara), which serves as a shop.

Another kind of hut called Chauyari has been introduced, and this is the form which Europeans have adopted in their cottages when they use a thatched roof. It consists of four plain sides, which, if the building is square, are triangular, and meet in a point; but, if the cottage is long, the two ends of the roof only are triangular; and the two sides (which are triangles truncated at the apex) form a straight ridge. Europeans have made great improvements in this kind of building, have surrounded it with a gallery to exclude the heat, have introduced windows, have divided it into convenient apartments, and have suspended cloth ceilings to free them from the vermin that occupy the thatch. These luxuries seem totally unknown to the natives of this district. Their Chauyaris are built of the same materials with their Banggolas; but being used chiefly among the rich, have usually wooden posts, and many of them have garrets that are inhabited, and have openings by way of windows.

The wealthy, such as great landholders and principal manufacturers, have in general brick houses, and are fast imitating the European fashion of building, such as has been introduced into Bengal. It is alleged in the Ayeen Akbery, that in the time of Akber even the houses of the great in Bengal were built entirely of bamboos. I am inclined, how-

ever, to doubt the authority of Abul Fazil in many things, and among others in this. That the great in Bengal may have then built Banggolos entirely of bamboos, with great neatness, and very commodious, is highly probable; but that they had not also brick houses is not likely. In fact tradition points out the ruins of brick edifices, that belonged to the natives of this district before the Muhammedan invasion; and the appearance of some of these ruins clearly indicated, that they were dwelling houses, and neither temples nor forts. In the older brick houses the Moorish style, with wretched narrow traps rather than stairs, low roofs, small apartments, much minute carving, and small windows, has been adopted. In some new houses a rude imitation of the Grecian architecture makes its appearance, the rooms are larger and better aired, and more furniture has been introduced.

Among public edifices those dedicated to religion are by far the most conspicuous. In my account of Peruya and its antiquities, I have mentioned nearly all that occurs to me concerning the religious buildings of the Muhammedans. Small mosques are numerous in the district, and consist of a cube covered with one dome, or of a parallelopiped covered with several. The minaret, which is the greatest ornament in this kind of building, has not been introduced, and the whole style may be considered as in the most rude state.

The most numerous and simple Hindu places of worship are called the Sthans, or abodes of such or such a deity, and are merely heaps of earth, or square terraces, which are generally placed under trees. Sometimes as an object of worship there is an uncut stone, at others there is an image cut in relief; but very often the only representation of the Deity is a small mass of clay a little painted. Most of these places being dedicated to the Soktis, or female destructive spirits, a stake is placed before the heap for fastening the head of the animals, that are to be sacrificed.

A more improved place of worship consists of a thatched hut, called a Mondop. In the greater part, even of these, there are no images, except a lump of clay, and at holidays a rude image is made of the same material, and is thrown into the river, when the festival is at an end. The walls of these huts, when made of clay, are often painted with rude and horrible figures of the Gods, and equally distorted repre-

sentations are formed of the Sola by the makers of garlands and artificial flowers, but both are considered as merely ornamental, and are not objects of worship. I have seen one building of this kind, which was said to have cost 16,000 rs. The size was inconsiderable, but the walls were made of wood carved with a most patient minuteness, in which, however, neither taste nor decency had been at all consulted.

Near many of these Mondops, and even near many houses, for the worship of the family gods, are erected the most rude form of the Mongchos, or stages on which the images are placed on the (Yatras) days of procession, while the people sport before them. These simple Mongchos consist of a small square terrace of earth divided into stages, each less than the one immediately below.

The next step at improvement is to construct a Mondop of brick for the usual residence of the deity. This is commonly a small square building with a flat roof. A temple of this kind has seldom any other Mongcho than one of earth; but it has usually an image, that is the object of worship, and commonly a house for the Piyari or officiating priest. The most elegant in this district, that I saw, is at Yogighopa, of which a drawing has been given (No. 11). This is open above. The image is placed on the small altar seen through the door, and is covered by a dome.

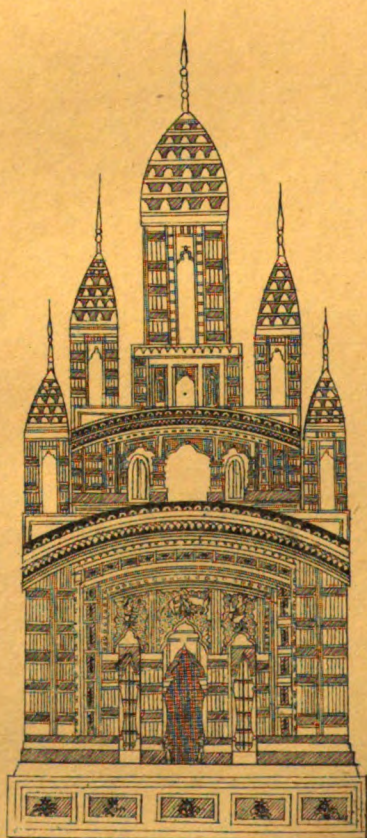
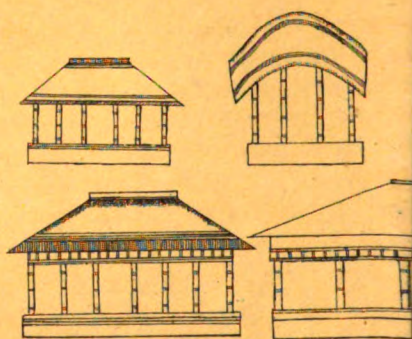
The next step is to add a kind of pyramid to the roof of the temple, which then becomes a Mondir. The Mondirs are often cased with carved tiles, and at any rate are plastered on the outside, and the ornaments on the plaster in general possess some taste. Many Mondirs built of late, instead of the pyramid, have adopted the dome of the Mosque; probably because workmen skilled to construct the pyramid could not be readily procured.

Advancing still farther, the temple for the usual residence of the image is enlarged, and in addition to the central pyramid one is added at each corner, and the building is then said to be a Pongchorotno, or to have five ornaments; or, if enlarged a little more, the roof is divided into two stages, each having a pyramid at each of its corners. It then becomes a Novorotno, or building of nine ornaments. Such buildings are very expensive, as in this district they are almost always incased with carved tiles. The drawing of a Pongchorotno

at Gopalgunj near Dinajpoor (*See Plate* 11, facing title-page), built 75 years ago by the mother of Raja Ramnath, will give a better idea of the style than any description. Only it must be observed, that in buildings so frittered away into minute ornaments and parts, the drawing looks much better than the building itself, especially as no Hindu temple, that I have seen, is kept tolerably neat. The interior of the building is to the last degree wretched. There is no light, except what comes through the door, and the masses of brick that are necessary to support such a roof have scarcely any cavity.

The first step towards improving the Mongcho is to build it of brick, in several decreasing stages, nearly of the same form with that made of earth. A stair leads up to the highest stage, in which a small apartment is made for receiving the image at processions. The next improvement is in each stage to have a chamber surrounded by a gallery, in which there are several doors or windows. Then at each corner of each stage a Rotno or pyramidal ornament is added. The most finished kind consists of 12 sides with 24 Rotnos disposed in two rows, and one in the centre over the apartment in which the image is placed. The drawing of the one at Gopalgunj will give a proper idea of this kind of building. Although it is of a considerable size, and cost an immense sum (it is said 20,000*l.*) there is no apartment in it above 12 feet in its greatest dimension, and the stair is steep, perfectly dark, and will not admit a man to walk with both shoulders equally advanced.

The temples here and in the south differ entirely in structure, the latter approaching much nearer to the Grecian or rather Egyptian style. This is probably, in a great measure, owing to the nature of the material; for the long masses of granite, so easily procured in the south, lead naturally to columns, flat roofs, and entablatures, while bricks lead to arches and pointed roofs. The style of ornament, however, is nearly the same in both parts of India. Some neat foliages possess considerable merit, the rest consists of numerous small mouldings, and monstrous distorted representations of the deities and their adventures, among which obscene figures are often a conspicuous part.

The number of public edifices of a civil nature seems never

to have been considerable. One inn (Sarai) at Maldeh, now in ruins, and a few small bridges form the whole. The bridges have very small arches, and none are employed on anything like a river; they have been merely made over rivulets. The fortresses seem to have been equally rude, and to have consisted in a straight rampart and ditch, with a few outworks at the gates. The only one, that appears to have been more strongly defended, is Uttor Gogriho, as I have already mentioned. The number has always been inconsiderable. The accompanying plan (*Plate* 12), drawn by the chief architect in the district, of the house and buildings of Baidyonath Chaudhuri, who took a pleasure in showing me all his works with the utmost politeness, will show the progress made in this branch of science.

Wishing to know, what skill he might have in geometry, I requested him to show me how he laid down the foundation of an octagon building, such as are in common use. He had a pair of ruinous European compasses and a square, but no rule nor scale; and I soon found, that the others might as well have been omitted in his apparatus, and were designed merely for show: his only scale was his arm, his only instruments a line and some pegs. He began by measuring off four equal portions of the line, fixing a peg at each; he then placed these in the ground, so as to distend his four portions of rope into a parallelogram. He then moved the pegs backwards and forwards, until his diagonals were equal, he then had formed a square. He then divided each side into four equal parts, which he found by doubling one of the sides twice. He then truncated each angle by passing a line between the division next it on each side. He thus had an octagon, but four of the sides were shorter than the others. This objection having been made, he said, that the four alternate sides, having doors in them, ought to be larger, otherwise the building would not look well; but being desired to make all sides equal, he went round, adding small equal portions to each alternate short side, until he found by experiment, that he had succeeded. He looked upon it as impossible to lay down an octagon, that should have all its sides equal, and each side of a given size. All he attempted was to lay down an octagon within a given square. He said, that he could also lay down any figure of an even

number of sides; figures of an uneven number of sides, such as pentagons, he considered as far beyond human skill.

Sculpture and statuary are in a still more rude state than architecture. The figure of Gones, which accompanies this account (see *Plate* 1, p.) will serve to give an idea of their stone images, and this is reckoned very handsome. There are, however, many stones, on which images of the gods of small dimensions have been carved in high relievo, and these are a good deal superior to Gones, although they are still very rude imitations of the human form, and are said to have been brought from the west of India many years ago. One of them is represented in *Plate* 5, see p. . The carvings on tiles, with which many of the religious buildings are encrusted are still more imperfect. The images of brass and the metals are as bad as those of stone; and some, which are made of potters' ware, are much more rude than I could have conceived, that any grown person could have formed. Painting is still at a lower ebb than sculpture.

To the ear of an European the native music appears in general harsh and disagreeable, and to men of science it is altogether intolerable. Although I am not at all nice, I confess, that I was much satisfied in travelling through the district to find, that the people had less turn for this pleasure, than is usual among the natives; and I cannot say, that in any other part of the country I was ever so little disturbed by its noise. The performers notwithstanding are pretty numerous, and the variety of noises which they can make, is considerable.

The highest description of musicians consists of bands of instrumental music, which accompany the voices of girls, who sing and dance. In this district there are very few persons of this kind, and they do not exceed 20 sets. The two Hindu castes, who follow the profession, the Rumjani and Kangchoni, have not found their way from the west of India to this district; and those, who follow it at present, are common prostitutes, that have learned to sing, and employ musicians to accompany their voice. As usual their motions in dancing are slow, lifeless, and without grace. Their greatest art is to jingle in time to the music, some chains (Ghungree), which are tied round their ancles. The girls are called Bayi, and there are usually two or three in a set.

The musicians, called Somaje, are three or four in number; one performs on a small drum (Tubla), the others on a kind of fiddle (Saringgi).

Boys taught to dance and sing, and dressed in an effeminate manner are in great request among the Hindus, and about 20 sets are employed in Maldeh and its vicinity, where the people are most luxurious. In other parts of the district there are no such persons. These boys called Bhoktiyas are usually suspected of very disgraceful practices. When they grow up, they perform on the musical instruments that belong to the set, which are the same as when girls dance or sing, only another kind of fiddle, called Sarinda, is sometimes used. Most of the other musicians belong to sets, that are employed in religious ceremonies.

The sets of musicians who sing the praises of Bishohori (the goddess of snakes), or who are called Monggol Chondi, or who sing the praises of Muhammedan saints (Pirer Gayan), usually consist of seven or eight persons; one chief or Serdar, who has a Thibet cow's tail (Chamor) in one hand, and a pair of small cymbals (Mondira) in the other; six Pail or assistants have small cymbals in their hands, and tie round their ancles rings of bell metal, which make a noise as they dance. One boy is often kept to sing and dance, but not always. All these persons sing and dance, but two others (Bayen) beat on large drums called Mridonggo. In this district there may be 350 of these sets.

There are probably about 150 sets, which sing the praises of Krishno (Songkirton). Each consists of a chief, who has a small drum (Khongjuri), or a pair of cymbals (Korotal); and of three or four (Pail) assistants, who use cymbals; and of one or two (Bayen) drummers, who beat the Mridonggo. Some persons (Zari), during the Mohurrum, are employed to sing the praises of Fatima, the daughter of Muhammed, and of her unfortunate sons, Hoseyn and Hassan. They are not accompanied by music. It is, however, at marriages, religious processions, and such great solemnities, that the full din of music arises; and that a herd of the lowest dregs of the people are employed to rend the ear with these formidable implements of noise. 1. Dhole; 2. Tikara; 3. Dhak; 4. Madol; 5. Dogor; 6. Kara; 7. Jorghayi; 8. Nagara—Drums; 9. Kangsi, or Gongs; 10. Sanayi, a kind of hautboy.

11. Singga, or buffaloe's horns; 12. Turi, or brass trumpets. Every man makes the most of his instrument, and pays little or no attention to his comrades.

Men often amuse themselves by singing hymns or love songs, accompanied by small drums (Dholok and Pakhoyaj); but it is considered as very disgraceful for a modest woman to sing, or play on any musical instrument. The only time when such a practice is admitted is among the Muhammedans, at the Mohurrum, when women are allowed to join in the praises of Fatima and of her sons.

A kind of men, called Akras, are strolling musicians, and sing hymns and love songs to the rich, and accompany their voice with a pair of small cymbals (Mondira), with the small drums, called Dholok and Pakhoyaj, or with two kinds of guitar (Tombura and Setar). Many young men, for amusement, play on these instruments, and accompany them with the voice.

COMMON ARTS.—*Personal Artists.*—Washermen are not so numerous in this district as in many others. The people are, in general, either too poor or too slovenly to employ them, and it is only persons in easy circumstances that use bleached linen. The common people occasionally go into a tank or river, and wash the clothes in which they are dressed, for in general they have little change of linen. In this district the Washermen use, chiefly, ashes, and they have no contrivance, such as a hot iron or a mangle, for making the linen smooth. The only bleachers in the district are those employed by the Company at Maldeh. The common washermen are almost all Hindus, of a very low tribe. They have no capital. In the whole district there may be about 650 houses, of which 250, including the Company's bleachers, reside in Maldeh. All are paid by the piece. The bleachers make high wages, 5 or 6 rupees a month; but the common washermen do not earn above 1½ rupees.

Almost all the tailors are Moslems, for the needle seems to have been totally unknown to the Hindus. In this district, although the Muhammedans are numerous, the tailors are few in number, and little employed, for the lower Muhammedans have entirely adopted the Hindu dress, and wrap their clothes round them as made by the weaver. The higher Hindus, on the contrary, have in a great measure adopted the

Muhammedan fashions, especially those who are employed in office, or when they visit European gentlemen; and the tailors are chiefly confined to the towns of Dinajpoor and Maldeh, in which there may be rather more than 100 families, and perhaps an equal number is scattered through the district. They have no capital, and usually work by the piece. A family, for the women also sow, may however earn four rupees a month, which is a decent subsistence.

All the barbers are Hindus, and are a pure tribe, and pretty numerous; for, in this district, there are between 1000 and 1200 families. They attend at all markets, where they shave and cut the nails of those who employ them. The usual hire is 10 Gondas, or about the eighth part of an Ana. Farmers and labourers shave only once a month, and generally pay the barber in grain. Rich men often keep barbers as servants, both as they are pure, and as they can shave them, pick their ears, cut their nails, knead their bodies, and crack their joints, of which operations the natives are very fond. A servant of this kind is allowed one rupee a month, and food and clothing. Those who work by the job make tolerable wages, and live easily. They shave without soap. Persons after mourning are shaved, and pay liberally; as do also bridegrooms on the day of their marriage; for, on that important occasion, particular pains must be taken. Ten days after a woman has been delivered, the nails of both her and the child are cut by the barber. No native woman in Bengal, except a shameless prostitute, will allow her hair to be cut, such care of her person being deemed incompatible with modesty.

In Dinajpoor a few people are employed in making a tooth powder, called Misi. This is composed of the *Myrobalans*, called *Bellirina* and *Chebula* by Gærtner (Boyora, Horitoki), of two other fruits called Majuphol and Tai, of green vitriol (Sulphat of iron), and of iron filings. It is reckoned to strengthen the gums, and when applied in a certain manner with betle, and some other substances, it renders the teeth entirely black, which is considered as an ornament. The persons who make this powder are usually poor old women.

The married Hindu women use red lead as an ornament, but instead of painting their cheeks, like our belles, they rub it on their foreheads. This piece of vanity is not permitted

to widows. The destructive female deities, however, consume a considerable quantity, as a present of this kind is supposed to be agreeable. In this district there are two persons who manufacture this pigment (Sindur); but I had no opportunity of examining their process. I understood, however, that they were poor and unskilled in their art. Their capital was supposed not to exceed 10 rupees.

Female ornament gives employment to a great many other artists. Among these are the persons called Lahari or Luri, who make rings of Shell lac, which the Muhammedan women wear round their arms, and which are called Churi. They are of various colours, and are, in fact, a hard sealing wax. The sealing wax, indeed, that is used in Bengal is commonly made by the Lahari, for in a warm climate the European kind is useless. The people employed in this way occupy 100 houses. Four or five rs. are a sufficient capital. They can make about 2 anas a day, or 4 rs. a month.

The Hindu females use bracelets made of shells, and this gives employment to many people, who are called Songkhobonik or Sangkhari. Of these there may be almost 200 houses in the district. The shells are brought from Calcutta by a merchant of Humarkhali, and are cut, polished and painted by the artists of this district. These require a capital of at least 50 rs., and a few are rich, as they have a stock of four or five hundred rs., with which they purchase many shells, and employ labourers to work by the piece. The shell is cut with a semicircular saw, and polished by rubbing it on a sand-stone. The workmen are very inferior to those of Calcutta, but no tradesmen in the district make better wages, nor have larger capitals. They make their goods chiefly without being commissioned, and retail them for ready money in their shops, or give them to petty traders, who retail them at markets. A pair of bracelets costs from one to seven rupees.

All Hindus must wear beads, and those of Vishnu's side ought to wear such as are made of wood or of various seeds. The people who make them are religious mendicants, so that it would be difficult to separate the profits of their two professions. The number in the district may be about 100 houses. The makers of garlands, of artificial flowers, and ornaments prepared from the Sola (Malakar), are a numerous

class, but very poor. In the district there are probably near 300 houses. They form garlands of flowers, which they collect partly in the fields, and partly from gardens. These are sold, and are used by the wealthy both for pleasure, and as offerings to the gods. The Sola I have already described. The ornaments made of this plant are very gaudy, being stained with glaring colours, and mixed with tinsel; but the workmanship is very rude. The same artists make numerous ornaments, that are used as toys by children, and at all processions, and that are suspended in places of worship. Some are very large, such as the biers which the Muhammedans carry about on the Mohurrum, and the stages on which the Hindus place their images at the Pujas of Durga, Kali, and Kartik. All these are committed to the waters when the ceremony is over, so that on each occasion the artists find new employment.

The colours which these people employ are orpiment, vermilion, white lead, red lead, verdigris, and a white talcose earth called Khori, which is brought from the west of India, and is similar to that which is prepared at Mailcotay, of which I have given an account in my travels into Mysore. The garland makers use also ink, such as is employed by the natives, and the best kind is prepared as follows:—Take 20 sicca weight of rice, parch it in a pot until it becomes quite black, put it into 60 s.w. of cold water, and allow it to remain a quarter of an hour. Then pour off the water, and mix it well with lamp black, by rubbing it in an earthen pot with a stick or wooden pestle. One sicca weight (179½ grains) of lamp black is sufficient. For fine writings a little gum of the *Mimosa indica* (trees No. 59) is added. What is commonly sold in shops, however, is made of soot in place of lamp black. The garland makers use also some vegetable dyes. The inner bark of the *Nyctanthis Arbor tristis* (tree No. 16) is beaten in a mortar. Its juice is expressed, mixed with lime, and by means of a brush is applied to the Sola, to which it imparts a red colour. Another red is prepared by 12 parts of the same bark, with 16 parts of the inner bark of the *Artocarpus* (trees, No. 103), and 8 parts of water. These are well beaten, and then the water is expressed, and used as a dye. The glue which these artists employ is made by boiling the inner bark of the tree No. 107, then beating it,

and expressing the water, which has a glutinous quality. The tinsel which these artists use is partly tin foil of various colours, and partly plates of mica.

In many districts those who make the mats on which the natives sit and sleep, and who make umbrellas, form a class that contains a considerable number of artists. In this district, however, I heard only of five houses at Dinajpoor who could be considered as belonging to this profession, and their work is very coarse. The art of making an umbrella that can be folded is here quite unknown, and indeed seems to have been equally so in every part of Bengal until introduced by Europeans at Calcutta. In this district almost the only mats that are made are composed of a species of *scirpus* called Nagormutha (see reeds, No. 13). The stems are split and interwoven, and form a mat which is soft, but destitute of neatness. Poor people make them at their leisure hours. The umbrellas that are most commonly used are made by the next class of artists. The Patoni, basket makers, or workers in bamboo and rattan, are a very low tribe of Hindus, who are, however, both useful and numerous. In this district there may be from 1000 to 1200 families. They are miserably poor, and do not require any capital, for two or three anas will buy more materials than a family can work between one market and another. Both men and women are equally capable of working the baskets, and both carry them to market, where in general they sell them for ready money. The women, however, take the greatest share of this trouble. Their poverty is chiefly owing to their lavishness, for they are much addicted to intoxication. It is, however, a good deal alleviated by their keeping swine, which afford them a wholesome nourishment.

Chatayi, mats made of bamboos, which are split on one side, and then laid open into a kind of thin planks, which are interwoven so as to form the mats. These are the principal articles in demand, and the only one that is exported. In all good huts these mats are placed over the frame of the roof, under the thatch; and where there is not a clay soil they form the side walls. They also are used in the fences, which enclose the yards of those who are in easy circumstances; and in all boats they form the roof to exclude rain, the cover of the platform on which the people work, and the

stowage by which the goods are kept dry. The demand is therefore very great. These mats are of two kinds; one four cubits by 3, which at Dinajpoor cost 4 rs. a hundred, the others are 2 cubits by 1½, and sell for 2 rs. the hundred. These people make also the umbrellas, of which almost every family in the rainy season has one or two. The top consists of a double net work of split bamboos, which confines some of the leaves of the sal or of the banyan-tree for turning the rain. This head is fastened to a bamboo handle, the upper end of which is split and the divisions separated, so as to render it more easily fixed. The whole is extremely rude. In the greater part of Dinajpoor every man thatches and builds his own house, either with his own hands, or by means of his servants.

Paper is made entirely by Muhammedans, who seem to have introduced the art. Before their arrival the natives, in their writing, appear to have used only the leaves or bark of trees. In this district there are between 80 and 100 families employed in making paper, and they are nearly adequate to supply the demand. The quality is very inferior, even to that made near Calcutta. It is brown, rough, uneven, spotted, fibrous, full of holes and brittle; ink sinks into it, and insects devour it with avidity. The people who make it are in decent circumstances, and require little or no capital. They usually carry it to the markets just as made, and petty traders buy it from the manufactures by wholesale, and afterwards retail it. The sheets are usually 24 inches long by 16 wide, and are doubled twice; 24 sheets form a quire, and the manufacturers usually sell 10 or 12 quires for a rupee.

The material is the Pat in its rough state. A sufficient number of bundles is thrown into a large jar that is sunk in the ground, and they are covered with a mixture of lime and water, in which they are allowed to soak for from two to nine days, according to the heat of the weather, the hotter, that that is, the less time being required. The bundles are then dried, and the lime that adheres is separated from them by beating and shaking. They are then moistened with water and beaten with a Dhengki, which has a cap of iron, and falls upon a stone slab. While it is beating, the pat is occasionally moistened, until it is reduced to a kind of pulp. This part of the operation, which is the one attended with labour, is performed entirely by the women. The pulp after

coming from the mortar is thorougly washed, and a portion of it is thrown into a wide-mouthed vat made of potters' ware, that is sunk to the level of the yard. A large proportion of water is added, and they are stirred until the pulp is properly diffused; but little pains is bestowed on this, which seems to be the chief cause of several of the imperfections that are in the manfacture. In fact, the pulp, with a very little stirring, is allowed to soak four or five hours, and is then wrought into paper. The workman's mould is made of bamboos split fine, and tied together parallel to each other, and this is extended by a movable frame made also of bamboo, which serves as a ledge to confine the pulp. The workman holding his mould with one hand stirs up the pulp with the other; then immerses his mould, and takes up a quantity sufficient to make a sheet. When he has allowed the water to escape he lays aside the frame, and, turning over the mould, places his new sheets of paper above those that he had previously made, and he repeats the operation until the pulp in the vat is exhausted. In this heap the paper is allowed to dry. It is then taken, sheet by sheet, and immersed in a decoction or starch made of rice, and having been dried is placed on a smooth plank, and rubbed with a round stone. This is to serve instead of hot-pressing, and in some measure effaces the marks of the mould, and renders the side of the paper that is next the plank tolerably smooth. The stone that I saw was a water-worn piece of granite far from being polished.

In one division I found three men who lived by binding books, such as are used by the natives for keeping accounts. These books are usually about 16 inches long, 6 inches wide, and 1 inch thick, and are stitched together at one end, like some old books of music. The cover is usually made of coarse red cotton cloth. The learned still adhere, in general, to stringing the leaves of their books on two threads, which pass through the middle of each sheet and through two boards, that serve for a cover. This mode, which was fit for books made of leaves, is exceedingly awkward and destructive with paper; but old habits are difficult to eradicate.

The manufacture of leather is by no means so thriving as it might be made, probably owing to the very low rank of the artists. The hides which they dress are those of oxen or kine that have died a natural death, and those of goats and

sheep. The Hindus here use the skin of the ox without scruple, although, strictly speaking, this is contrary to law. Buffalos' hides and the skins of deer and of the wild hog are unaccountably neglected. Neats' hides are first put into lime and water to separate the hair, they are then washed. Take a pot, put into it 5 sers (96 s.w. lb. 12⅓) of powdered leaves of Lodh (trees, No. 80), and an equal quantity of water; then put in two washed skins, and let them remain two days. Then in two other pots repeat the process on the same skins. The skins having been thus tanned are dried, and are beaten twice in a wooden mortar, each time having been previously moistened with water. The skin is of the usual brown colour of tanned leather, and may be made black by rubbing it with green vitrol. It serves for the soles of shoes, and for covering the baskets with lids, which are called Petaras, and which are used in place of trunks. Raw neats' hides cost one-sixth of a rupee; the artists cannot tell the weight, but they are small and thin. When dressed they sell for one-fourth of a rupee. Goats' skins are those mostly used. Each costs one-twentieth of a rupee, and when prepared sells for one-fourth of a rupee, if dyed red, white, or yellow; and for one-sixth of a rupee, if stained black or brown. In order to separate the hair ten of them are put in a pot with some lime and water, and allowed to remain there from 25 to 30 days; each skin requires above a pound of lime. The 10 skins, when freed from hair, are washed, and put in a pot with about 10 sers (24⅔ lb.) of the unripe pods of the *Guilandina* called Gaukungchi, which have been beaten in a wooden mortar with about 20 sers (49⅓ lb.) of water. After standing two days they are put into an equal quantity of fresh tan of the same kind, and then they are dried. They are afterwards twice beaten in a wooden mortar, having been previously moistened with water. The skins are then fit for the upper leathers of shoes, and are of the common tanned colour, which may be changed into black by a little green vitriol. If red skins are wanted they must be dyed with lac before they are put into the tan. Skins may be made of a dirty orange or reddish yellow by rubbing them, when newly taken out of the lime, with the inner bark of the Deuyo (trees, No. 103), beaten into pulp with a little water. White skins are prepared without tan by rubbing them with salt after they have

been taken out of the lime, and then beating them. The only good colours are the black and red. Sheep skins are treated exactly in the same manner. The whole of these operations is usually conducted by the women, as being the most laborious; but the hides are very badly dressed, as may be readily imagined from the account that I have given. The shoes, trunks, and saddles are made by the men. A man and his wife can prepare 8 pair of shoes in a month, and these sell from one-half to one-sixth of a rupee a pair. The shoemakers have little or no capital, but make tolerable wages, or about 3 rs. a month, which would enable them to live decently, were they not violently addicted to intoxication. Every native that can afford it wears leather shoes.

A class of people called Kurail make leathern bags (Kupo), in which boiled butter, oil, and molasses are kept. They live chiefly in the divisions where sugar is made, as the demand for their bags is principally to contain molasses. The great variety and number of drums used in this district would employ a considerable number of people to make them, did not most of the performers construct their own instruments.

Although almost every man among the natives who has dedicated himself to the art of war, and uses a musket, knows how to make gunpowder; there are some artists who prepare this substance and construct fireworks. In this district I heard of 12 families of this kind, and saw some of them perform. They are far from being dexterous, but require little apparatus, and are easily satisfied.

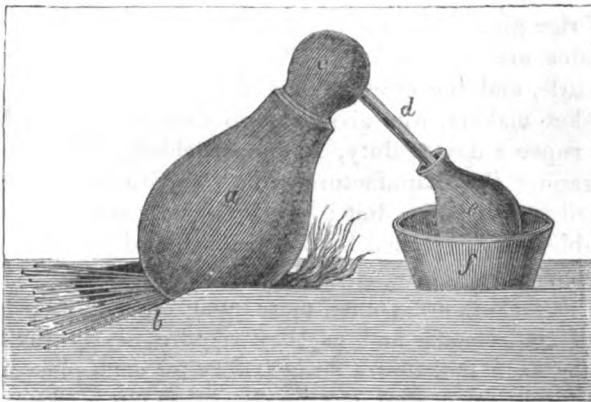
A Portuguese trader at Dinajpoor makes wax candles, a few of which are consumed by the natives at holidays, the remainder is exported. I have already mentioned, that he has a lease of the wax; part of this also is exported without being manufactured.

In Dinajpoor five families are supported by making matches of bits of wood covered with sulphur. These are called Diyosalais.

Forty or fifty families of poor people are supported by making balls of charcoal dust united by means of starch, which are used for burning the tobacco, that is smoked in the Hungka, or other similar instruments.

Those who prepare the tobacco for being put into the pipe

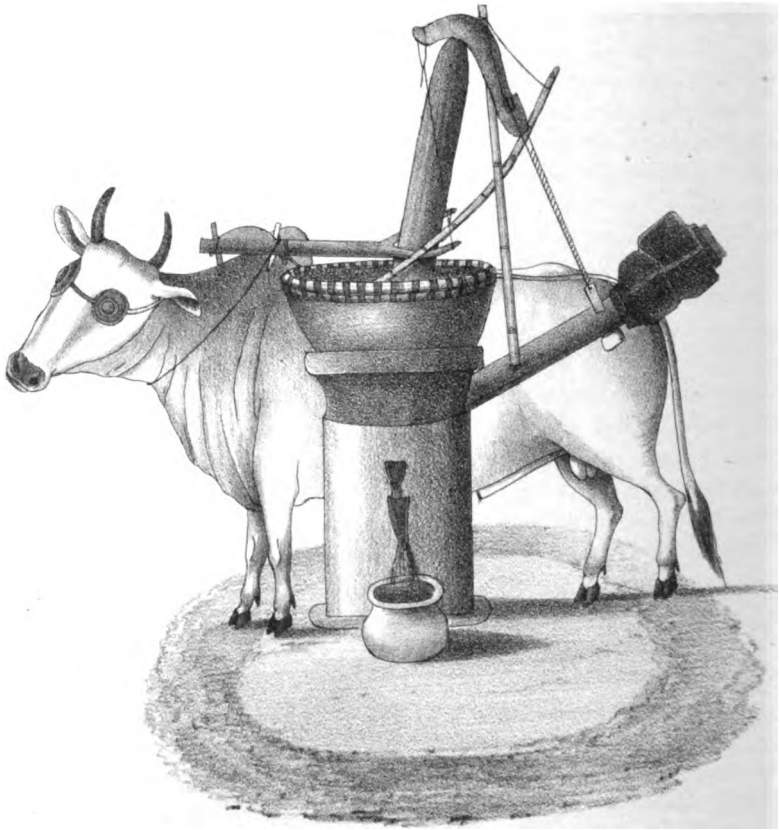
are a much more important set of artists, and in this district they occupy between 700 and 800 houses. They require very little stock, 4 or 5 rupees being sufficient. They take between 20 and 30 lbs. of tobacco, dry it in the sun, and beat it in a wooden mortar, or with the dhengki. Then they dry it, and beat it with three-fourths of its weight of treacle (kotra). It forms a kind of cake or ball, and is sold by retail at all the neighbouring markets, as well as in the shop of the manufacturer. These balls keep for 10 or 12 days. Rich people use some other ingredients; but none is prepared in this manner for sale, it is done by the servants of those who use it. The artists are rather poor.

The people who distil spirituous liquors (Modwaleh) are of a very low caste, and the profession is opprobrious; but they seem to live easily, and require some capital. The demand is very inconsiderable, and of course the number of stills is small, and may be from one to two in each division. These stills are extremely rude, and are only employed to distil rice. The body (*a*) consists of an earthen jar, which is

placed over a hole in the floor (*b*), that serves for a fire-place. An earthen pot (*c*) is luted to this by way of a head, a straight wooden tube (*d*), conducts from the head to the cooler (*e*), which is another earthenpot, that is placed in a pan filled with cold water (*f*). A man sits by the pan, and constantly pours water on the cooler with a cocoa nut shell.

Another man supplies the fire. The whole apparatus is luted together before the operation begins, and the distillation is continued until it is conjectured that all the spirit has risen. The distiller then removes the lute and takes away the cooler, which contains the spirituous liquor. It is scarcely possible to conceive any chemical operation so rude and imperfect. The liquor is never rectified, nor re-distilled.

A manufacturer at Chintamon informed me that he took 40 sers of rice (60 s. w. or $\frac{54}{100}$ lbs. the ser), and boiled it, just as rice is usually prepared for the table; he then added one-eighth of a ser of Bakor, which is a mixture of dried herbs, that is prepared by a kind of people called Jogis, who collect the plants in the woods. It is said that this contains 300 different plants. I have had no opportunity of verifying this; but know that a few plants are sufficient. The boiled rice and bakor mixed remain in a heap for six days, are then very mouldy, and in this state are called beckon, or seed. This seed is put into a jar with 40 sers of fresh boiled rice, and 160 sers of water, and are allowed to ferment two days. The fermented liquor is then distilled by 10 sers at a time, and about one-fourth part is drawn over. That is the 80 sers of rice give about 4 sers of spirit. This man said that the grains are not saleable. People will not give them to their cattle, and the only persons that will carry them away are basket makers, who give them to their hogs. Each still pays a rupee a day as duty, I suppose chiefly with a view of discouraging the manufacture. The spirituous liquor thus prepared is execrable; but is not sufficiently strong to be inflammable. It is retailed by the distiller, and can be sold by no other person.

The oil-makers are a much more numerous and respectable class of tradesmen; and as they require nearly the same stock for each mill that a farmer does for each plough, it is generally supposed that the profits of the two classes are nearly the same, mill for plough. The mill is indeed moved by one ox, but two must be kept for each, one to relieve the other, and the mill is much more expensive than the plough. This, and the quantity of grain that must be purchased, makes the oilman's capital rather heavier than the farmer's; but there being no pretence for exactions on the part of the landlords, the returns being equally diffused throughout

London. 1838. W. H. Allen & Co. 7 Leadenhall St.
J. Netherclift Lithog.

every week in the year, and above all there being no advances made for oil, the situation of the oilmen is in general preferable to that of the farmer. The mill is exceedingly imperfect, as will be seen from the drawing (*Plate* 13). It is on the same principle with the oil-mill of Mysore, but much ruder. The principle is the same also with that of the sugar-mill; but is much better fitted for the purpose of expressing oil.

In some divisions the oilmen are wealthy, and make advances to the cultivators for their mustard seed. In others they are more needy, and buy no more at once, than will last them from one market day to another. Others again receive the grain from the farmer, deliver a certain proportion of oil, and for their trouble keep whatever more they can express from it, together with the cake. In Ranisongkol, where the oilmen are richest and most numerous; and where they export a considerable quantity, I obtained the following account from one of them, a wealthy and respectable man. The mill receives at one time one Don of seed (Turi), which measures 421 cubical inches, and weighs 152½ ounces avoirdupois. A little water is added, and the mill grinds three hours. At first some seed comes from the spout; but afterwards, as this is thrown back, and as the cake forms, the oil comes away pure. It should amount to five-sixteenths in weight of the seed, or to rather more than 47½ ounces. The oil at present sells at 206 ounces for the rupee, and the seed at 2½ anas for the quantity that is put at once in the mill. The value of the oil is almost 3¾ anas, so that he has 1¼ ana profit on each grinding, and the mill grinds twice each day. The cake is half the measure of the seed, and may be worth the sixth part of an ana.

At Dumdumah and Rajarampoor it is reckoned, that the oil of Sorisha should amount to five-sixteenths of the seed, and the oilmen are contented to grind, and return in oil four-sixteenths of the weight of the seed, which they received. A mill there grinds daily 12 sers of 96 s. w., or about 29½ lbs., and produces near 9¼ lbs. of oil, of which the oilman gets one-fifth part and the cake. Sometimes he grinds for pay, and, for his mill, receives 2 anas a day with about 2½ ounces of oil. At Potiram it is said, that 30 sers of Sorisha give only 7 sers of oil, and that a mill in one day can grind 30 sers

of 60 s. w., or about 46¼ lbs. The mills are usually employed by the day, and receive 1 ana in money, all the cake, and rather more than ¾ lbs. of oil, worth in all about 2½ anas a day, or 4 rs. 11 anas a month. At Lalbazar, where there are a great many oil mills, it is reckoned, that the capital required for each is double of that required for one plough. It is said, that each ser of Sorisha or Tora gives ¼ ser of oil. Each mill can grind 15 sers of 58 s. w. a day (or 22⅓ lbs.), and obtains rather more than 5½ lbs. of oil. The usual price of seed is 75 sers, or five days grinding for the rupee, which produce $27\frac{9}{10}$ lbs. of oil, and this, selling at 10 sers the rupee, is worth 1 rupee 14 anas. The gain is therefore 14 anas in five days, or 5¼ rs. a month, besides the oil cake.

It must appear very remarkable, that these accounts should vary so much, some alleging that Turi produces five-sixteenths and Sorisha four-sixteenths or even less of its weight of oil; while others allege, that the latter gives five-sixteenths, and there is no doubt, that the Turi gives more than the Sorisha. In the only experiment, which I made, I procured one-quarter of the oil from Sorisha seed. I suspect, however, that the oilmen often cheat, pretend that the seed gives much less than it actually does, and keep the remainder to themselves; for Mr. Tucker informed me, that an oilman had offered to express Sorisha seed for the cake alone; this cake no doubt would contain abundance of oil, which must have been afterwards expressed, otherwise the man could not have lived. The number of families, which follow this profession, amounts to above 2000, many of whom have more than one mill, and several as many as five.

In this district most of the persons, who prepare milk (Goyalas), have no cattle; but live in towns, and keep only two or three cows, like other persons in easy circumstances. They purchase the milk partly from poor farmers, and partly from those who have large herds of milch cattle. Their number may be between 6 and 700 houses, and a man, who has 25 rs. capital, is considered as in a thriving way. In many places they have shops, and they attend at all markets to dispose of their commodities, which are boiled butter (Ghi or Ghrito), curdled sour milk (Doyi or Dodhi), butter milk (Matha or Ghol), inspissated milk (Khyir), and curd (Chhana). The two last are made only when commissioned by the

makers of sweetmeats, by whom alone they are used. The first thing in general done with milk is to boil it, and the boiling is sometimes continued, until the milk is reduced to a kind of extract called Khyir, which is used in sweetmeats. The natives use only boiled milk, the taste of this fluid, as it comes from the cow, is considered as unpalatable.

In a few parts of this district the milk, as it comes from the cow, is churned, and the butter is separated, after which the remainder is boiled, and made into Doyi as usual; but in general the boiled milk is put into a pot, and there is added a little old Doyi, which occasions it to curdle and become sour. This is a favourite article of luxury with the natives, and butter is usually prepared by churning these sour curds or Doyi. What remains, after the butter has been separated, is a kind of acid liquor called Matha or Ghol, which is analogous to our butter-milk, and is only used by the poor. The butter is never used without having been boiled, which converts it into an oil, that preserves much better than butter. Even in this climate it undergoes little change for one month, and may be used after having been kept a year. It is often adulterated by boiling Doyi or sour curds along with the butter. This preparation of butter answers very well in cookery, and might perhaps be used in Europe to great advantage. The quantity consumed in the district is exceedingly small, and except in the largest towns none is ever made without being commissioned, so that it is not an article of common sale.

The Chhana or curd is prepared by boiling the milk, and by adding to it, while hot, some acid milk, which coagulates the whole into one mass. This is put into a cloth, and the whey is expressed, so that it is a kind of cheese. The people, who prepare sweetmeats from curds, are called Moyra among the Bengalese, and Haluyikors in western India. The artists of the two countries, however, keep totally distinct; and those of Bengal use most milk, while those originally from western India use more flour in their sweetmeats. In this district there may be about 100 houses of Haluyikors, and 120 of Moyras. They have capitals of from 15 to 20 rs., and usually make 4 or 5 rs. a month. They all keep shops, and also expose their goods for sale at the common markets. The Moyra prepare, from sugar curds and inspissated milk,

several kinds of sweetmeats (*Mishtanno* vulgo *Mitayi*) called Monda, Pengra, Tokti, and Khyirphuli. They prepare others, called Roskora and Monohora, from cocoa-nut kernels and sugar; others, made of sesamum seed and sugar, are called Tila, Khaja, and Kodma; and finally a kind, called Batasa, is made of sugar alone.

The Haluyikor prepare sweetmeats, called Chhana Bora, from curds and sugar; those called Paintaoya are made of flour and curds; those called Motichur, Jilapi, Goja, Khaja, and Monbhog, are made of flour and sugar; and the Elaichdana is made of sugar and cardamom seeds. These sweetmeats please neither the eye nor palate of Europeans, especially those made by the Haluyikor, all of which are fried in oil or butter. The rich natives use large quantities.

Maldeh was formerly celebrated for its Morobba or vegetables preserved in sugar or honey. The art seems to have been introduced by the Muhammedans from the west of India, and the fall of the Moslem power has reduced it to one practitioner. He preserves Amloki, *Phyllanthus Emblica* W. Horitoki, *Myrobalanus Chebula* Gærtn. Amra, *Mangifera indica.* Anaros, *Bromelia ananas.* Sriphol, *Cratava religiosa.* Kushmando. Sotomuli. Tetul. *Tamarindus indica.* The sight of these conserves perfectly satisfied my appetite. I cannot therefore speak of their flavour.

In Dinajpoor three or four families from the west of India make sweetmeats called Puya and Phulari. The former is composed of the flour of rice mixed with molasses (Kotra), the latter is composed of the flour of pulse mixed with the same sweet subtance. The art has now become common in the district, and in country places each family prepares for its own use.

Bhujaris are a class of people originally belonging to Bengal, as well as to the west of India, and about 600 houses are employed in this district. Seven or eight rupees are considered as a sufficient capital, and a family can make from 2½ to 3 rs. a month. In large towns they keep shops, but in country places sell their goods in the open markets. These people make the preparations of rice called Khoyi and Muri, that have been already described, and they parch field peas and the pulse called Chona, which form Motor Chaja and Chona Bhaja. All these, and also the preparation of rice

already described under the name of Chira, are mixed with extract of sugar-cane (Gur), and sometimes with treacle (Kotra), and are either formed into balls (Moya), or into cakes (Chakti), that are much used by the natives. The same persons also sell a mere mixture of Khoyi with the extract of sugar-cane, which is called Murki. Cakes made of sugar-cane are called Tila Khaja. These same people take the cake extract of sugar-cane, and, diluting it with water, boil it, and form two kinds of cakes Patali and Pheni. The former is very heavy, and the latter is light; but I have not learned the difference in the operation, only that some milk is added to the Pheni, when it is boiling, which must in some degree purify the extract. Some persons (Dail-hari) in Maldeh and Dinajpoor live by grinding wheat, and by making Dail from Kolai, that is by separating the integuments from the grain of pulse. This is an art introduced from the west of India; but it has now become common, and except in large towns is performed by the women of all families.

Artists employed in working durable materials, wood, earth, or metal.—Under the synonymous names Chhutor, Sutrodhor, and Barui, we must include joiners, cabinet-makers, carvers, and carpenters of all kinds. In this district there may be between 6 and 700 houses occupied by such persons. The greater part are merely employed to make the miserable instruments of agriculture, and occasionally a coarse stool or chest, and are among the poorest set of artists in the district. About towns, where a little furniture is used, and where some houses have wooden doors, window-shutters, posts, and beams, and where some palanquins are required, they live more comfortably, and make from 4 to 8 rs. a month. A man, who makes 8 rs. must have 40 or 50 rs. capital, and employs some workmen. The following articles are those usually made at Dinajpoor, with the usual extent of price from the lowest to highest.

Meyana or palanquin, 10 rs. to 20 rs.; chests, 2 rs. to 10 rs.; Toktoposh, a bedstead with a plank bottom, 2 rs. to 4 rs.; Khat, bedsteads with rattan bottoms, ½ r. to 3 rs.; Jolchauki, bathing stools, 12 anas; Piri, stools on which the natives sit when eating, 1 ana to 8 anas; Kursi, a kind of chair, 4 anas to 8 anas; Michiya, a kind of seat, 1 ana to 2 anas; Singhason, a throne for the images of gods, 8 anas to 3 rs.; Sepaya, a wooden stand for a lamp or candle with three feet, 1 ana to 2 anas; mortar and pestle, 4 anas to 5 anas; spinning wheels, 2 anas; wooden

shoes, Khorom, 2 anas to 4 anas; plough without the iron, 4 anas to 6 anas.

The palanquin approaches to that of a Calcutta beau, about as much as a market cart does to my Lord Mayor's state coach, and the other articles are rude in proportion. Even this is not the greatest imperfection. The joinings are so badly fitted, that the furniture is very rickety and unfirm, a fault that extends even to the very neat workmanship, that is now made at Calcutta, Mungger, Patna, and other places, where European improvements have been introduced. Oil and sugar mills, Dhengkis, and many other articles are made, when commissioned.

In this district the number of carpenters employed in building boats is very small; for, although Sal timber fit for the purpose may be readily procured from Nepal and Bootan by the Mohanonda, Atreyi, and the Korotoya, yet few traders keep large boats, as they could not be used during a great part of the year. A few trading boats, however, are built of Sal; but, until I reach some place, where the business is carried on to a considerable extent, I shall decline saying anything on the subject, farther than, that all the materials are furnished by the merchant, who builds the boat, and the carpenters are hired by the month. The head workman is allowed 7 rs. a month, inferior workmen 6 rs., and the lowest class 3 rs. On the Jomuna river some boats are constructed of mango wood. They are clinker built, and the fibrous roots of some aquatic plants, that grow in marshes, are used as caulking, being placed between the edges of the planks, before they are nailed together. When moist, these plants swell, and effectually prevent leakage. These boats last scarcely longer than two years.

One of the landholders, Baidyonath Chaudhuri, employs a few skilful men in carving figures of the gods on wood; but they have been brought from other districts. Their work is very rude, owing probably to the want of a good design; for they are capable of considerable neatness in execution. The implements, which the carpenters have in this district, are the Bayis, a narrow hatchet; the Basuli, a very good adze; Batali, chissels of several kinds; the Randa, a very imperfect plane, which is designed merely for smoothing, and not for forming grooves or mouldings; the Korat, a small wretched

saw; the Turpon, a drill moved by a bow and string; and the Munggur, a mallet. The natives have neither auger, gimlet, rule, square, compasses, nor bench, instead of which one man holds the timber, and another planes it, while it is placed on the ground, and both workmen sit on their heels. A few European tools have found their way to the town of Dinajpoor, such as planes of various kinds, and the handsaw, compasses, rule, and square.

Sawyers may occupy about 100 houses, and are in about the same circumstances with the carpenters. They are mostly Muhammedans, and generally work by the piece. At Dinajpoor the sawing a log, about 7 or 8 cubits in length, into plank about 1¼ inch thick, was estimated at 8 anas for every cubit of its circumference, which is the usual manner with these people of estimating the labour that a log will cost in sawing. This, it is evident, has no necessary connection with its solid contents, which the people of this district have no means of calculating. Sawyers are sometimes paid by the month, two men being allowed 5 rupees. The saw is about 4 feet in length, and its shape is an irregular curve; the handles are both fixed, so that the saw cannot be taken out without moving the wedges, which prevent the planks from impeding its motion; the teeth are very rudely formed, and are not bent alternately to the different sides, so as to make a cut sufficiently wide to admit of free motion; but the cutting edge of the saw is considerably thicker than the back, which answers the same purpose. The log is not laid horizontally; one end rests on the ground, the other is raised on a wooden horse, so as to form about half a right angle with the earth. This enables the man below to sit during a considerable part of the operation. The log is first marked with lines, and then one end having been cut, the other end is turned up for the saw.

Turners (Kungdkor) are very few in number; I heard of only seven houses; and it is probable that not above three or four could escape my notice. They work only in wood, and two men are always employed together; one who pulls a rope, first with one hand and then with the other, to turn the lathe; and one who applies the chisels; the two cheeks are fixed in the ground, and one must be dug out every time that a new piece of wood is to be put into the lathe. The articles turned are — 1. Part of the spinning-wheel—2. Wooden platters

(Barkosh)—3. Wooden cups, boxes (Kotuya and Bati)—4. Wooden basons, rolling-pins (Belon)—5. Parts of the instruments used for smoking tobacco (Nolicha, Nol, Baitok)—6. Rods carried by messengers (Horkora Chhori)—7. The feet of bedsteads. Their wages and situation in life are like those of common carpenters. All those who work in wood have irregular employment, and are often very poor, although they have good wages when employed.

Potters, in the country, have regular employment, and are as easy in their circumstances as any artists in the district. They require little or no capital; for, whenever a kiln has been burned, the pots are sold for ready money to the petty traders, who retail them in markets. At Dumdumah, where there are many potters, and these reckoned as good as any in the district, I took the following account.

There are two kinds of ware made, the one red, the other black. I shall first describe the red, as that is in most common use. The clay used for this pottery-ware is called Kabal, is of a dirty livid colour, and is purchased from people who dig it, and bring it to the house of the potter, who, for liberty to dig the earth, supplies the officers of government and the landlords with pots. This clay is watered, kneaded with the hands and feet, and beaten with a mallet. It is then made up into a mass, cut into thin slices, watered, and kneaded again. It is then fit for being placed on the wheel. The wheels are of three kinds. One is about 1½ cubit in diameter, and consists of four spokes and a rim of bamboo, that are coated with clay mixed with the fibres of pat (*Corchorus capsularis*). Another is about 1¾ cubits in diameter, and is composed of a solid mass of clay, mixed with pat. It is about 4 inches thick at the centre, and 2 inches at the circumference. Neither of these kinds is baked. In the centre of each is a stone, in which a small cavity has been formed, and this rests on a point of tamarind wood, that rises a few inches above the floor. A little clay is added, wherever wanted, in order to bring the wheel to an equilibrium. The third kind of wheel is but rarely used, and is made of the transverse cutting of a sal or Jak tree, 2 cubits in diameter. Its motion continues longer; but the expense of even this is considered as a serious objection. The workman sits on his heels, as usual, and gives his wheel a circular motion by

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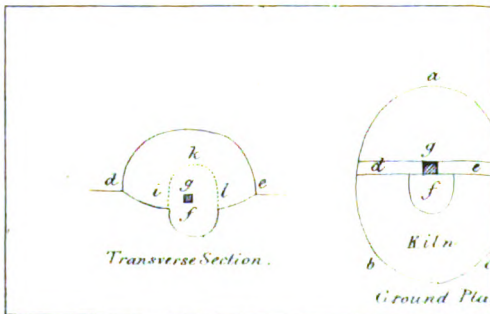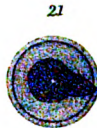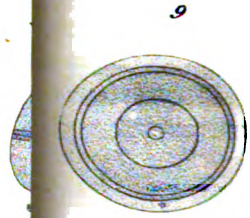
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means of a stick, one end of which he places in a hole that is near the circumference. The motion communicated to the smaller wheels lasts only a short time, and requires to be repeated two or three times for each vessel. Except the wheels, the only implements required, are, a long knife, with a handle at each end, to cut the clay, a mallet to beat it, a few sticks, and moulds and mallets of baked clay to shape the pots, and a string or wire to cut them from the wheel. A great part of the ware, however, is not made on the wheel. The mouths only of the most common vessels used in cooking (Hangri or Patil) are made in this manner; the bottoms are merely kneaded, and then joined to the circular mouth. This part of the operation, and the drying of the pots in the sun, after they come from the wheel, is performed by the women, who also apply to the most conspicuous parts of their pots a kind of pigment, made of Ranggamati. This is a clay much impregnated with red ochre of iron, which is found in a great many places of the district by digging to a little depth, and contains small pebbles. Over-night some of this is put into a pot, with much water; next morning the water and finer parts of the clay are drawn off, and evaporated in the sun, until somewhat thick, like a pigment, which is applied with a brush, before the pots are quite dry; and when they are burnt, the parts that were so covered acquire a kind of metallic lustre. The pots, having been dried six hours, are fit for the kiln.

The manner of constructing the kiln is as follows:—An oval cavity, *see Plate* 14, A. (*a b c*), is made in the earth, which slopes gradually down to the centre, where hemispherical cavity (*f*), about 2½ cubits in diameter, is dug, to serve as a fire-place. At one side of this is erected a semicircular wall of mud (*d e*), which crosses the longest diameter of the oval at right angles, and is 10 cubits long, and 6 cubits high. Its bottom is perforated with a square aperture (*g*), through which the fuel is thrown. An arch of clay (*i k l*) is thrown over the fire-place, and is perforated in several places, to allow the flame and heat to reach the pots. With a few repairs, this kiln lasts for a long time, and its construction does not cost a rupee.

The following is the manner of burning:—The whole space of the larger segment of the kiln over the fire-place, and as

high as the wall (ground plan *b c d e*, longitudinal section *d m c l i*, transverse section *d b k c e*), is filled with all the kinds of unbaked potters' ware that are in demand, after they have been well dried in the sun. The pots are covered with 3 inches of reeds (Ulu), over which is placed earth 2 inches in thickness; the fuel is then thrown into the fire-place, and consists of small sticks and reeds (Berna). The fire is kept up from sun-set until midnight; the pots are taken out in the morning. These pots are well burned, and are of a bright brick colour, but they are very imperfect. They are brittle, and, having no glazing, imbibe so much grease in cooking, and are so rough, that they cannot be kept clean. Although they imbibe a good deal of every liquor that is put into them, they are not sufficiently porous to admit of such an evaporation as will cool water.

The clay used for making the black earthenware is called Kassa, and is of a yellowish colour. It is prepared and formed into vessels, exactly as the live clay is; the difference of colour in the two kinds of ware arises chiefly from the manner of burning. The kiln for the black ware is smaller, the wall being only 6 cubits long by 3 high; the fire-place is of the same size. The pots, when placed in the kiln, are covered with 3 inches of straw, above which the ashes of straw are laid 3 inches thick, and are watered, which makes them cohere. The fire is applied, at first, slowly, and is then raised very high, from sun-set until midnight, when some dry cow-dung is thrown into the fire-place, and the aperture is shut to confine the smoke, of which a great quantity issues from the dung. The pots are not taken out until the following afternoon. In fact, the colour seems to proceed entirely from the smoke, which enters the pores of the ware, and never can be entirely removed; but these black vessels are unfit for cooking, as boiling water always extracts some of the colour. They are more porous, and not so brittle as the red pottery, and their colour hides nastiness. They are chiefly used as platters, and vessels for holding cold liquors, and sell about $\frac{1}{8}$ dearer than the common red ware.

It must be observed, that the want of glazing or enamel must always render the Indian earthenware a dirty kind of vessel, and accordingly no pure Hindu will use the same earthen vessel twice; but this custom, in itself proper, has

been extended to the pottery of China and Europe, than which no vessels can be cleaner. This, it must be farther observed, is a complete bar to improvement. From a view *Plate* 14, the various articles commonly made will be seen, and it will be perceived, that the potters of this district are not destitute of taste in the forms of their vessels, but the execution must necessarily continue wretched, so long as the prejudice against old vessels continues.

A potter, whose family consists of four men and two women, says, that in each month he can burn 5 kilns of red ware. Each kiln is worth about 4 rupees.

The expense is fuel, at 1 rupee a kiln, 5 rs.; clay, 32 loads of about 98 lb. for each kiln, at 10 anas, 3 rs. 2 anas; total, 8 rs. 2 anas; leaving between 11 and 12 rs. a month for profit.

This is probably somewhat underrated, as in such cases may be usually expected. Less cannot be allowed than 4 rs. for a man and woman who live as these people did, or 3 rs. for a man's labour and one for a woman's, which would make the profit 14 rs., or about one-sixth part more than the potter stated. The number of potters in the district may be about 1400 houses. Besides making pots, a part of their profession, in several places of this district, is to dig wells. This is the case wherever the soil is light, as in such parts, in order to prevent the sides from crumbling, recourse is had to rings made of potters' ware. These rings are about 6 inches deep, and from $1\frac{1}{4}$ to $1\frac{1}{2}$ cubits in diameter. The sides are about an inch or $1\frac{1}{4}$ inch thick. The well is first dug about two cubits in diameter until water is found. The rings are then laid one above the other, and as they are laid the space between them and the sides is crammed with earth. A well of this kind lasts about five years without repair. Where the soil is stiff the rings are not necessary, and potters are not employed to dig.

The worship of Durga, Kali, Kartikeyo, and Soroswoti, as performed by the Hindus of Bengal, and by these alone, requires a number of images made of unbaked clay, which after the celebration of the religious coremonies are thrown into the river. In different parts of Bengal some other deities are worshipped in the same manner, but the custom does not extend to this district. This worship has given rise to a profession. Some who practise it are potters, and others are

the makers of artificial flowers, who are at any rate employed in ornamenting the images, and the stages on which they are carried in procession. In some districts the artists of this kind possess very considerable merit, and mould in clay, with great neatness, whatever model is shown to them, and this might be employed as an excellent means of introducing a good taste among the natives. The images, it is true, that are used in worship require little attention, except to make them gaudy, as they cannot be baked, and are thrown into the river; but good models might be given to these artists, and very handsome moulds might be formed and baked, which would come very cheap, and be an excellent ornament for the houses and domestic chapels of the natives, so as by showing them correct images to wean them from the deformed objects which they now possess. The Muhammedans of this district are not behind in giving employment to those who make images, for rude clay images of horses are offered at the tomb of every saint, and these are baked. It would, however, be difficult to find out any workmen so rude as the image makers of this district, nor did I conceive it possible that any grown person could have failed so much in the imitation of nature. I shall therefore defer giving any account of the art until I reach some place where it has arrived at some tolerable degree of perfection. The profession gives employment to about 80 families. They stain the earthen images, of a red colour, with the bark of the root of a wild species of Morinda called Chhoy-choka. This, beaten with a duck's egg and some quick lime, forms a kind of red varnish that is not easily removed.

Brick makers did not constitute a trade of such importance as to obtain a place in the establishment of Bollal sen, and still are not numerous. About 120 families are acquainted with the process, and when bricks are wanted engage to furnish any quantity for which advances are made. On receiving the money they buy wood and hire labourers, whom they superintend and direct. Very often the fuel is furnished by the person who wants the bricks. The bricks are made in the open air, and of course can only be formed in the dry season; and, if a heavy day's rain happens, very great losses are sustained. The earth chosen is the common free soil, which contains a large proportion of sand mixed with the

clay. This is thrown into a pot with some water, where it is allowed to soak for two or three days. It is then taken out, lumps are separated, and it is well beaten. It is then spread on a piece of ground that has been cleared and smoothed, and is laid on this of the thickness which it is intended that the brick should have, which is usually about 1½ inch. When it has dried a little a man takes a long bamboo, which has the blade of a reaping hook fastened to its end, at right angles, and he draws this through the clay, keeping it straight by means of a (traveller) noose, which runs along a line stretched in the direction that is to be cut. He thus cuts the whole into bricks about 7½ inches long by 6½ broad. Some days afterwards these are raised, and placed on their edges. After a few days more they are formed into walls, until a quantity sufficient for a kiln is ready. In one kiln one hundred thousand bricks are usually built, with alternate layers of wood and straw, and these being burnt the operation is completed. Twenty men take six weeks to prepare 100,000 bricks, and 14 days to burn them. I found that for each kiln the landlord (Zemindar) paid 30 rs. in advance. He also furnished the fuel, and when the bricks were delivered he gave 40 rs. more. He did not, however, receive 100,000 bricks for 70 rs., and the fuel, for the bricks were numbered before they were placed in the kiln, and many are spoiled in the burning. The usual wages in the dry season being 1½ rupee a month for each labourer, the contractor had 10 rs. profit, besides his monthly hire.

The use of the mould was totally unknown to the native brick makers until introduced by Europeans. I have not learned what difference it makes in the expense; but even the bricks made for a gentleman of Dinajpoor with a mould, I observed, were very rough, and could not be employed to advantage for building a wall that was not covered with plaster. Those made after the native fashion are exceedingly rude, although well burned, and in all their finer buildings are either coated with plaster, or incrusted with tiles which are cut smooth, and are in general carved. The first plan is by far the cheapest, admits of all the ornaments of Grecian architecture, and looks fully as well as stone. It has accordingly been adopted in all European buildings.

The incrusting with cut tiles is exceedingly expensive, and

never could be employed in any work of good taste; but it suits the native fondness for minute ornament and grotesque carving, and is employed in all the finer buildings of this district. I shall therefore give an account of it which was taken from the best workman of the place. The earth is of the same kind, and is prepared and cut in the same manner as for common bricks, only the pieces are larger, being usually 4 inches thick, 14 inches long, and 9 inches broad. Some cow dung is added to the fuel to increase the heat. The bricks, when taken out of the kiln, are soaked a whole day in water, after which they are cut exactly square, and are smoothed on five sides by means of a small adze with a short handle and of chisels, which operation it is evident must be very expensive, and after all the bricks would not make such a smooth neat wall as those used in the south of England. The expense is, however, enormously enhanced by the carving on the flat side of the brick, which is often made to represent the fables of the Hindu mythology; and gods; goddesses, princes, Europeans, animals, coaches, carts, ships, &c. are also represented, and most miserably caricatured. Some Europeans imagine that this is done with a view of rendering them ridiculous, but I am persuaded that this is not the case, the god being no better treated than the sailor. It proceeds merely from want of skill and taste in the designer. Obscene figures make in general a conspicuous part. The bricks are carved with small chisels. After the operation is completed the brick is first soaked in an infusion of tamarinds, and then a number is put into an iron vessel with about a pound of oil for each, and they are roasted over a fire until the oil disappears. The workmen are employed by the month, so that is difficult to state the expense. Each brick goes through the hands of three artists; one cuts it square with an adze, his wages are 5 rs.; a second smooths the surface with a chisel, and receives 6 rs. a month; the third carves the figures, and is allowed 7 or 8 rs. wages.

Bricklayers are about twice as numerous as professional brickmakers, and, from being often unemployed, make but poor wages, for they receive 5 or 6 rs. a month when they work. Neither their walls nor arches are neat, and their principal merit is in the application of plaster, either as a coating for walls, to form a roof or floor, or as a cement to

retain the carved tiles with which the walls are incrusted. The most approved composition used in this district is as follows:

5 parts of slaked lime in paste (Kolichun); 10 parts of powdered bricks; 1½ part of Fenugreek flour (*Trigonella*); ½ part of Thahuri flour (*Phaseolus Max.*) ½ part of treacle (Kotra); 5 parts of water; mix them with a trowel, and apply them immediately.

There are several cutters of stone, or masons, in the employment of Baidyonath Chaudhuri, whom I have several times mentioned as the chief encourager of the arts in the district; but all these tradesmen have been brought from a distance, and even from Benares, and of course have high wages. One man in Dinajpoor lives by forming weights of stone.

About 80 families live by collecting shells, and burning them for lime. I had no opportunity of ascertaining the kinds of shells, for the people have a peculiar aversion to collecting the objects of natural history, probably looking on the study as idle or absurd, and the employment as ridiculous. The shells are collected in marshes and rivers during the dry season, and if any considerable quantity is wanted, such as for building a house, advances must be made in due time, for in common the people gather no more than serves the usual demand for chewing with betle, for dyeing and tanning, and for whitewashing a few places of religious worship. Europeans in general procure stone-lime from Silhet, but the landlords prefer the shell-lime, as they can make the advances with little risk and trouble, and as they consider the lime better. I did not see the furnace. The lime is sold in three states by those who make it. 1st. Slaked lime in powder (called simply Chun or Gungro chun) sells usually at Dinajpoor for 3 *mans* (96 s.w. the ser), or 290½ lb. for the rupee. This is used for mortar and is made of shells that are not cleaned. 2nd. Kolichun, which is slaked lime mixed with a great deal of water, and is that used for whitewashing, and for making plaster. The shells for this are carefully cleaned before they are burned. 3d. Leya or Kada chun is reduced to a very white fine paste, and is used for chewing with betle. This is made of some peculiar kinds of shells very carefully cleaned.

In this district the working of the precious metals is at a

very low ebb with regard to skill. The artists are abundantly numerous, there being between 4 and 5 hundred houses inhabited by those who follow this trade. They are remarkably poor, and have no capital, except a few wretched tools, which they carry to the person's house, who wants any thing made, and who furnishes the materials. Their character for dishonesty is such, that a person must always watch to prevent them from adulterating the bullion, after having secreted a part. In the account of the ornaments, that are used by the people, will be seen the articles, which these tradesmen make. All persons, however, who wish to be thought fashionable, bring their ornaments from Moorshedabad or Calcutta, when they can procure a trusty friend at these cities to superintend the making. The charge for workmanship both of gold and silver is from $\frac{1}{16}$ to $\frac{1}{8}$ of the metal, so that, when they work in gold, they should have vast profit, or very little, when they work in silver; but there is probably some secret in this, which those who employ them do not understand; for those, who are sent to watch, can only judge, whether any silver is absolutely taken away in a metallic state. The natives seldom, if ever, use plate at their tables.

Among the natives of Dinajpoor the various preparations and alloys of copper are in great demand, as must have been perceived in reading lists of furniture and ornaments; yet the number of copper-smiths does not exceed one half of the goldsmiths, for most of the ware is imported ready made, and artists are chiefly required to keep it in repair; whereas no one can trust to the purity of the gold or silver ornaments, that could be purchased, and it is only people of fashion, who occasionally go to capital towns, that can procure gold ornaments from thence. In the base metals there is less danger. The imperfection of the workmen prevented me from taking an account of the manner, in which the alloys of copper are formed, a most interesting subject, to which I shall pay the most minute attention on the first favourable opportunity. The copper smiths work in copper, brass, bell-metal, lead and tin; but there is a separate set of artists, who work in these two last alone. The copper smiths almost always furnish the metals, and keep shops, where they retail their goods, and they also retail them in open markets. They therefore require a capital. From 50 to 100 rupees, however, are sufficient, as

they purchase the metals in small quantities at a time from the merchants, who import them. In some parts of the country all the vessels are cast, in others they are all hammered. There are many persons, who retail the goods imported, chiefly from Kangtoya (Cutwa R.) and Moorshedabad, who are mere shopkeepers, and know nothing of the art. A coppersmith can clear between 4 and 5 rs. a month. Wrought brass costs from 1 rupee 8 anas to 1 rupee 14 anas the ser according to the fashion. That which is cast is cheapest. Wrought bell-metal costs from 2 rs. 4 anas to 3 rs. Wrought copper costs from 2 rs. 12 anas to 3 rs. The ser is of 80 s.w. $2\frac{51}{1000}$ lb. avoirdupois.

In this district about 120 families of Thataru are employed in making tin bracelets, which are worn by Muhammedan women of all ranks. They are nearly as easy in circumstances as the coppersmiths, and require less capital; as they need no more metal at once, than will suffice from one market-day to another. Petty traders often purchase their goods, and retail them at markets. One man from Puraniya makes Hungka bottoms of a mixture of metals called Bidri. I was very desirous of learning the art, because the alloy is said to consist of iron and lead, and is unknown to European chemists; but the man declined giving me any information on the subject.

Blacksmiths (Kamar) occupy between 6 and 7 hundred houses, and are about in similar circumstances with the coppersmiths. When not otherwise engaged, they prepare with iron of their own, and retail at markets, the common implements of agriculture, such as the plough-share, sickle, bill, hoe, (Kodal) hatchet (Kural), Khonta, and weeding iron. They also prepare in the same manner some household furniture, such as ladles, pot-hooks, kitchen knives and lamps both standing and hanging; and some coarse cutlery, such as knives, scissors, and betle-nut-cutters; when ordered by the barber, they make his razors, and nail-cutters; the former is an instrument very terrific to the patient. The European cutlery has made little way into this district. The blacksmith can also prepare an instrument called Kajollota, which is placed over the lamp for collecting the smoke used as a paint, he also makes locks and padlocks, possessed of every imaginable defect, and can make such tools as the carpenters

use. A few tradesmen, at Ghoraghat chiefly, the remains of a number who were formerly at the place, can make arms, such as match-locks, swords, and spears; but most of the arms now in the district are imported. The blacksmiths also make nails and clamps for boat-builders; but the quantity required being small, and the demand irregular, no such thing as a nail can be procured ready made. If one is wanted it must be commissioned. The hoes made near Nawabgunj are reckoned good, and the manufacture employs several people, that receive advances from traders, who send the hoes to neighbouring markets. The greatest labour, however, which the blacksmiths of this district undertake, is to make boilers for those, who prepare the extract of sugar-cane, or for the manufacturers of sugar. An estimate of one of these latter boilers, of the smallest kind, weighing 6 *mans* of 60 s. w. the ser. ($369\frac{1}{2}$ lb.) will give some idea of the state of the art. The sugar manufacturer furnishes 12 *mans* of Birbhum iron, one half of which is consumed in working. This costs from 36 to 39 rs. according to the rate of the market. Six men working constantly can make a boiler of this size in a month, and receive 24 rs. or 4 rs. a month each. But such expedition is not usual. They more commonly require two months, and work only a part of each day at this heavy labour. The remainder is employed at small jobs for their usual customers, or in making some of the small articles, which are sold at markets. Thus $269\frac{1}{2}$ lb. of iron, very rudely wrought, cost from 60 to 63 rs. of which $\frac{2}{5}$ are the price of labour.

In this district one blacksmith cannot work by himself, he must have a man to blow the bellows, and he has usually an assistant to work with a large hammer; the man, who manages the forceps and small hammer, is the chief. The proportion of their pay is 8 anas for the forceps, 5 anas for the large hammer, and 3 anas for the bellows. The two former sit on their heels, and cannot be said to display great activity; but the creature, who manages the bellows, may be considered as the quintessence of indolence. The bellows, except in being two small, are not badly contrived, and are made somewhat like two common pair of kitchen bellows joined by the muzzles, and far separated at the other extremity. These bellows are placed vertically, and on the

back board of each is a button, which the workman takes between his toes, and, lying quietly down on his back, moves the boards backwards and forwards with his feet. In Dinajpoor and Maldeh are five or six men, who may be called cutlers. They clean arms, especially swords, and two or three of them have wheels for sharpening knives and razors.

Manufacture of Cloths.—As government are no doubt already sufficiently acquainted with the state of the manufactures carried on by the Company, I shall avoid saying any thing on that subject, farther than to state the effects, that have been produced on the manufacturers by the diminution of the capital, which the Company employ in that way. I shall in the first place begin with those, who prepare the raw materials, as bought from the merchant or farmer. I have already given an account of the preparation of the silk and *pat,* until fitted for coming into the weaver's or dyer's hands, and shall therefore here confine myself to cotton.

There is a description of people called Dhunaru, who clean cotton, after it has been freed from the seeds, by beating it with the string of an instrument like a bow, which separates all the fibres, as is done in the operation called teasing. In this district there are only 7 or 8 persons of this profession, and they are employed only when cotton is wanted for stuffing quilts, matresses or pillows, and the operation of removing the seed, and of picking and cleaning the wool, is performed by the women, that spin it, who use a smaller bow (Dhunkara).

The preparation of cotton thread, therefore, is a principal manufacture, and occupies the leisure hours of all the women of higher rank, and of the greater part of the farmers' wives. Even the women of the Brahmans here employ themselves in this useful industry, and in fact every woman is employed in it, more or less, except those belonging to trades, in which both men and women are engaged, such as weavers, tanners, and the like. The farmers' wives are however the greatest spinners, and are usually thus employed during the whole afternoon. The raw material chiefly used in about two-thirds of the district, is imported from the west of India by the way of Bhogowangola; but many of the people in these parts wear cloth made of *pat,* and a little cotton is raised in some parts of that extent; while most of the cotton raised in the dis-

trict is the highest priced, so that probably not above three-fifths in value of the whole raw material may be imported. To the east of the Atreyi, and south of Dinajpoor, the cotton produced in the country is sufficient for the demand; and, as I have said, is of a much superior quality to that which comes from the west; but this is so much cheaper, that it is more fitted for the coarse goods, that are the great manufacture of this district.

The cotton that is imported, is already clear from the seed. It is brought by large dealers, who deliver it in small quantities, such as an cwt. to petty traders, for about 18 rs. a *man* (82 lbs.); and these retail it at about 4 lb. the rupee, to the women who spin, and who again sell their thread to the weavers, unless they wish to have it wrought for family use; so that in the whole business scarcely any capital is required, except by the merchant who imports. In the part of the district where the cotton is reared, a great part is spun by the wives of the cultivators, and the remainder is retailed by the farmers at the weekly markets, so that almost the whole business is carried on without capital, or at least with one so much sub-divided, that its value can scarcely be perceived. In a few places where the Company makes advances for fine cloth, such as is not commonly used in the district, the weavers are under the necessity of bespeaking the thread, and generally pay the price beforehand.

The women free the cotton from the seed by the usual hand-mill employed in India; then beat it with the bow, and spin it with a small miserable wheel, that is turned by the hand; all implements extremely imperfect. In the district of Badolgachhi, where the cotton manufacture is the most flourishing, a woman buys 1 ser of 60 s. w. ($1\frac{530}{1000}$ lbs.) of cotton with the seed, which in one month she cleans and spins. She obtains about three-sixteenths of cotton-wool fit for spinning, and her thread, when of the finest quality, weighs one-sixth of the rough cotton, and sells at 12 s. w. or very near five ounces (4.928) for the rupee. This is on the supposition of a woman's doing no other work. The price of her thread is $13\frac{1}{3}$ anas, the cotton costs 2 anas, she therefore has $11\frac{1}{3}$ anas for her trouble. Four anas a month may, however, be the usual rate of gain by spinning in the afternoon. There is no regulation for the length of the reel, and neither

spinners nor weavers can form an estimate of the length of any given weight of thread. Very few of them, indeed, can either read or perform any arithmetical computation, and they judge merely by the eye or experience of the quality and fineness of the thread. They divide thread into four rates. The first sells at from 8 to 12 s. w. for the rupee; the second at from 13 to 18 ditto; the third from 19 to 26 ditto; the fourth from 27 to 50. The first and second qualities are chiefly spun from the fine cotton of this district, or from what grows at Gaur in the immediate vicinity. The coarser kinds are made from imported cotton, and form the greater part of the thread spun in the district. This coarse cotton loses from one-sixteenth to one-eighth in spinning and cleaning; so that 75 s. w., intended for the coarsest kind of yarn, costs 8 anas, and at 50 s. w. of thread for the rupee produces 1½ rupee. Intended for the finer quality of yarn 70 s. w. costs 8 anas, and sells at about 3 rupees, 8 anas worth of cotton-wool is therefore on the average converted into 36 anas worth of thread. The raw cotton produced in this district, as coming from the farmer, I have estimated at one lac of rupees in value, of which 80,000 may be fine. Some of this is exported; but some fine is imported at Maldeh; so that 80,000 rs. worth of fine cotton wool may be spun in the district, when spun its value will be raised to about 4,00,000 rs. About 1,50,000 rs. worth of coarse cotton wool is imported, and 20,000 grows in this district, and the value of this, when spun, may amount to 7,65,000 rs. The total value of the raw material, as sold to the spinner, is about 2,50,000 rs. The value of the yarn, as sold or applied to use by the spinner, may be 11,65,000 rs. and the profit therefore will be 9,15,000 rs.

The Pat is spun by two kinds of spindles, the Takur and Dhara. A bunch of the raw material is hung up in every farmer's house, and every one who has leisure, forms with one or other of these spindles, some coarse packthread (Sutoli), of which ropes are twisted for the use of the farm; but it is only the low Hindu castes called Rajbongsi, Kongch, and Polya, that form this packthread for being woven into sackcloth, or spin a finer thread from whence the cloth called Megili is woven. As these people usually rear the plant, spin the thread, and weave it, no estimate can be formed of

the different stages of the manufacture. By far the greatest part of the cloth, that is used dyed in this district, receives the colour in the state of thread, and the operation is most commonly performed by the weavers, but there are a few houses of professed dyers, chiefly in Maldeh, who dye thread, and a few others in different parts, especially Dinajpoor, who dye turbans and girdles.

The dyers of Maldeh are about 25 houses, and confine their operations to indigo and lac. The ser weight, by which all the operations are conducted, contains 92 s. w. or is nearly $2\frac{56}{100}$ lbs. avoirdupois (16,522 grains). The indigo vat is made thus:—Take 5 sers of indigo, break it into small bits, put it into an earthen tub or vat with five pots (about 60 sers) of alkaline ley, and stir them about for three hours. Then put this mixture into two pots, and add to each $\frac{3}{4}$ ser of Chakunda seed (*Cassia Tora* W.) boiled in $2\frac{1}{2}$ sers of water, and boil the mixture all night, that is to say a fire is kindled under the pots, and burns under them until the fuel is consumed, the people having gone to sleep at their usual time. In the morning, the fire having gone out, stir the decoction with a stick for $1\frac{1}{2}$ hour. This boiling and stirring must be performed four nights and mornings. The vat is then ready for dying. The thread, either silk or cotton, is kept 40 minutes in the pot. It is then wrung, dried in the sun, and washed. If the colour is not deep enough, it must get another dip in the other pot. The remaining colour is applied to other thread, the dye of which is completed by other vats.

The alkaline ley is prepared as follows:—Take 20 sers of fresh burned roots and stems of the plantain tree. Put them into a large earthen pot, that has a hole in the bottom, over which a quantity of grass is laid. Through this filter slowly 60 sers of water, which forms the ley fit for use. Five sers of indigo should give a good full colour to 6 sers of cotton thread, or to $2\frac{1}{2}$ sers of silk. It costs 2 rs., being a kind very inferior to that prepared by Europeans, and is made in the form of balls by the natives of Rongpoor, and is generally much adulterated with clay. The good indigo, prepared by Europeans, is never employed by the tradesmen of Maldeh. The colour which they dye is very good. The same people often dye green with indigo; but generally

the weavers give them thread, which has previously been dyed yellow, either with turmeric, or with the bark of the Jak tree, as will hereafter be described. The latter green is fixed. That dyed with turmeric is perishable.

For dying 1 ser of cotton thread blue, the dyer receives 12 anas, or 4½ rs. for each vat. The materials may cost 2½ rs. The labour occupies five days, in which the workman gains 2 rs. If he dyes the cotton green, and performs the whole steps of the operation, he receives 1½ r. for each ser. The dying silk costs 1½ r. a ser; so that the artist, when he dyes silk, has only a profit of 1¼ r. on his vat, but probably some circumstance was concealed, which renders both equally advantageous.

It is to silk alone, that the dyers give a colour with lac. The manner, in which this is done, is as follows. Take 11 sers and 2 rs. weight ($\frac{1}{48}$ part of a ser) of stick lac. Having removed the sticks, it will weigh 10 sers. Grind this in a hand-mill, and sift it, grinding the larger pieces repeatedly, until the whole is reduced to powder. It is then put into a boiler, which is a strong vessel of earthenware, coated on the inside with melted shell lac, mixed with sand. To the powdered lac add 10 sers of water, in which $\frac{1}{98}$ part of a ser of sajimate (carbonate of soda) has been dissolved, tread the lac and water with the feet, and then boil them for three hours. The lac must then be put into a basket, and the water allowed to drain from it into the pot, and the infusion is then to be poured into another vessel. Five other similar infusions are to be made from the same lac, so that in all there are 60 sers of infusion. The lac exhausted of its colour is reserved for sale, and the infusion must be boiled down to 55 sers. To this add ⅛ of a ser of Lodh bark (see trees, No. 80) powdered, and stir about the mixture. Next day the infusion is decanted, and there are 50 sers of clear dye fit for use. In the meantime an infusion of 4½ sers of bruised Tamarinds in 20 sers of water has been prepared, and decanted. Boil 3 sers of silk in one-half of the dye, and in one-half of the infusion of tamarinds for 1½ hour. Then wash it, and boil it for an equal length of time in the remainder, when the colour will be complete. The stick lac is brought from Asam by the way of Moorshedabad, and costs 11 or 12 rs. a *man*. The 11 sers of stick lac gives 7 sers of

the lac separated from the colour, which sells at 9 rs. a *man*. The lac therefore costs in all 3 rs., and the seed lac sold brings 1 rupee 9 anas; so that the dye for 3 sers of silk costs 1 rupee 7 anas, besides tamarinds, Lodh, and soda; but these are trifles. The Lodh is brought from Rajmohal. The soda from Patna. I did not learn the price of dying a ser of silk; but this branch is more profitable than the dying with indigo; and is in fact the chief employment of the Maldeh dyers, who make high wages. One man and his wife can clear at least 12 rs. a month. Besides a house they require 100 rs. capital, if they dye with lac; 10 rs. are sufficient, if they dye only with indigo. They never buy thread to dye, and then sell it; but content themselves with dyeing what is brought at so much the ser. Whatever more remains to be said on the art of dyeing in this district, will be found in the next article.

The cloth manufacture, that seems most peculiar to this district, is that woven of a mixture of silk and cotton, and from the chief place where it is made, this cloth is called Maldehi. As the thread is dyed before it is woven, I shall continue to detail the process of dyeing as that is performed by the weavers, and their wives, and then proceed to give an account of the other parts of their art. And first I shall treat of the method used with silk. The first operation is to bleach it, and this is done in three ways. The operation is performed each time on from $\frac{1}{2}$ to 2 sers (80 s. w.), or from about 1 to 4 lbs. of silk; but I shall suppose the quantity to be one Calcutta ser or $2\frac{51}{1000}$ lbs., and all the other weights to be in proportion. For the first kind of bleaching, the silk is steeped the whole night in water. In the morning it is wrung, and dried in the sun. It is then boiled, with 1 ser of soap, in a sufficient quantity of water, for about 48 minutes. Then it is washed in clean cold water, and dried in the sun. The silk is of only a dingy white, but it is better than the others. The second quality of bleaching requires 10 or $\frac{12}{16}$ of a ser of soap, the process in other respects is the same. The third quality is not allowed soap; but is boiled with 2 sers of the fresh made ashes of the root and stem of the plantain tree. In each of these operations one-quarter of the silk, by weight, is lost. All the kinds are used as whites in cloth, and all may be dyed of every colour; but the colours

dyed on the first are clearer and higher priced than those dyed on the second, and these on the second are again superior to the colours dyed on the third.

In the following manner a fine bright but perishable yellow is given to silk by turmeric. For one skein of bleached silk, weighing 2 s. w. (359 grains nearly), take 5 s. w. of well cleared turmeric, and grind it upon a stone, adding a little water during the operation, until it is reduced to a pulp. Then add to this 20 s. w. of water, and filter the infusion. Soak the silk two or three days in this water. Then wash it, and put it into a solution of $\frac{1}{2}$ s. w. of alum in 20 s. w. of water. Then dry it, and the operation is finished. A good fixed yellow, although not so bright as that given by turmeric, is communicated to silk by the wood of the Jak tree (*Artocarpus integrifolia*, trees No. 102). A skein of silk as before, is soaked a whole day in a solution of alum, and is then dried. It is then put into a decoction of Jak wood prepared in the following manner. Take 40 s. w. of chips of Jak wood, boil them all day, adding occasionally water so as to make a strong decoction, which is strained. In this the silk remains two days, it is then washed, and dried in the sun.

Two colours are given with safflower (*Carthamus tinctorius*), and are called Kusom and Golabi. The Golabi is a fine rose-red, but is not a fixed colour. For one skein of silk take 10 s. w. of safflower, dry it and reduce it to powder; then add 1 s. w. of impure carbonate of soda (sajimati), and rub them with the hands for about 12 minutes. Then put them on a cloth strainer, and allow 40 s. w. of water to drain through them. In this water steep the silk a whole day, and wash it. Then put it into an infusion of tamarinds, which is prepared thus. Take 5 s. w. of ripe tamarinds freed from the shell, and having rubbed them well with 20 s. w. of water, strain this for use. In this infusion the silk is kept between 48 and 72 minutes, and is then dried in the shade. The Kusom colour is better fixed, but is not such a fine red; still, however, it is a beautiful colour. The only differences in the process are that 30 s. w. of safflower are used, and that $\frac{1}{4}$ s. w. of alum, and 1 s. w. of lime-juice are added to the infusion of tamarinds.

Silk is dyed of a fixed red colour with Monjista (*Rubia monjista*). Soak a skein in water for four or five hours. Then keep it as long in a solution of alum. Then put it for an hour into a decoction of Monjista, which is thus prepared. Take 10 s. w. of Monjista, beat it to powder, and boil it for about five hours in 80 s. w. of water. Pour off the water, boil the Monjista in similar quantities of water three times, and keep all the four decoctions. The silk remains an hour in each. It is then washed, and dried in the sun. The red of Monjista by Jak wood is changed into what the natives call golden (Sonala); but in fact into a colour, which more resembles that of new copper. After the first immersion in alum the silk is soaked in the decoction of Jak wood for 120 minutes. It is then again soaked in an infusion of alum, and then is dyed with the Monjista; but 5 s. w. of this is sufficient.

There are a great many colours given, in which a preparation of iron called Moski is employed. This is a Persian word signifying black, and all these dyes have probably been introduced by the Muhammedans. I shall first give an account of the manner in which Moski is prepared, and then detail the various colours in dyeing which it is used. Take 20 s. w. of wheat flour, 5 s. w. of extract of sugar-cane (Gur) 1 s. w. of boiled butter (Ghi) 240 s. w. of old iron, 400 s. w. of water. Let them stand in a pot 10 days in hot weather, and 16 days in cool. After being strained, the liquor is fit for use. If not strained, it will keep four or five months, without spoiling. The Moski contains an exacetate of iron; but it would require very accurate experiments fully to develope its other ingredients, and how far these may have any share in the operations of the dyer.

There are three colours called Uda; one given by the Horitoki (*Myrobalanus Chebula Gært.*, trees No. 14); another by the Chamolloti (a *Cæsalpinia* not described by Willdenow nor in the Encyclopédie); and the third by alum. The first kind is dyed thus. Take 10 or 12 Myrobalans, beat them, and infuse them in 20 s. w. of water for four or five hours. Then put a skein of silk, that has previously been dyed with lac, into this infusion of Myrobalans for from 120 to 144 minutes. Then wring it, and put it into 20 s. w. of Moski for

a similar length of time. Then wash it in cold water, and dry it in the sun. This is a fixed dark red like Russian leather.

The second kind of Uda is equally well fixed, and is darker than the former. I shall first describe the manner in which the infusion of Chamollotti is made. Take one-half s. w. of the dry pods separated from the seeds, powder them, and beat them well in a mortar with 20 s. w. of water, and strain the infusion for use. The pods of this plant, when green, contain a quantity of clear viscid liquor, that surrounds the seeds, that in the ripe fruit becomes dry, and that probably is the part in which its dyeing qualities reside. In order to dye Uda with this plant, put a skein of silk, that has previously been dyed with lac, into the above mentioned infusion for two hours. Then wring it, and put it into 20 s. w. of water mixed with 10 s. w. of Moski. Dry it in the sun, and in two hours, if the colour is not good, put it again into 20 s. w. of water and 10 s. w. of Moški. Then wash the silk in cold water and dry it in the sun.

The third kind of Uda is equally well fixed, and is a clearer colour. Take a skein of silk, that has been dyed with Lac, put it for one hour into a solution of one-fourth s. w. of alum in 20 s. w. of water. Then put it into Moski as in the last mentioned process.

Moski gives silk that has been dyed with Monjista, a fixed colour called (Tamrojyoti) or copper colour. The process is rather tedious. First the silk is put into the infusion of turmeric for 24 hours; then washed, and put into the solution of alum for 24 hours; then into a decoction of Jakwood, which is changed two or three times in the course of the third day. After this the silk is soaked for half a day in a solution of alum. In the remainder of the fourth day it is soaked in the decoction of Monjista. It is then washed, and kept for two or three hours in a mixed infusion of Myrobalanus and Chamolloti. It is then wrung and put into Moski for six hours.

The dye called Filtusi, from a Persian word signifying Elephant colour, is a dirty black, but is well fixed. A skein of bleached silk is soaked six hours in a solution of alum, and is then wrung. Two decoctions, one of Jakwood the other of Monjista, are then prepared, as before described,

10 s. w. of each is mixed, and the silk is soaked in the mixture for an hour and a half. It is then washed, and put for an hour into the infusion of Chamolloti. It is then wrung, and put for two hours into Moski. Finally, it is washed and dried in the sun.

Silk is dyed a lead-colour (Sisa) by Moski. The skein must have been bleached in the best manner, and soaked for an hour in a solution of alum. It is then wrung, put into the Moski, washed, and dried in the sun.

The Polas Kungri, or bud of the *Butea frondosa*, is a colour that I have not seen. The object from whence its name is derived, is black with a tinge of green. The skein of silk is soaked for 24 hours in the infusion of turmeric, and wrung. It is then put for two hours into a solution of alum, wrung again, and soaked a day in the decoction of Jakwood. It is then washed in cold water, wrung, and put for three hours in the infusion of Chamollotti. It is then wrung, and having been put into 40 s. w. of Moski, the pot is placed in the sun a whole day. It is finally washed, and dried in the sun. The colour is said to be fixed.

The dye called Lobonggo, Kornophuli, or clove colour, is a fixed brown. The skein of silk is soaked three hours in the solution of alum, then wrung, and soaked for a whole day in the decoction of Jakwood. It is then wrung, and again soaked for three hours in the solution of alum. After being wrung it is soaked for a whole day in a decoction of Monjista, and during the course of the operation this is changed four times. It is then wrung, and put for two hours in the infusion of Chamollotti. Finally it is wrung, kept for a day in a pot of Moski, exposed to the sun, washed, and dried in the sun.

The colour called Panduki, from the name of a flower is a well fixed lilac. The skein of silk must have been bleached in the best manner. Take 2½ s. w. of the infusion of Lac brought from the dyers, add to this 10 s. w. of water, in which 1 s. w. of tamarinds have been infused for a short time. In this mixture wash the silk for three hours, wring it, wash it, and keep it for two hours in the infusion of Chamollotti. Then wring it, put it for half an hour in 2½ s. w. of Moski, diluted with 30 s. w. of water, wash, and dry it in the sun.

These are the colours given to silk thread. I shall now detail those which the weavers give to cotton, and which are three in number.

The first, called Salu by the natives, is a well fixed light pomegranate colour. Take 20 s. w. of cotton thread soak it three days in cool water, wash it merely by rubbing it with hands, without beating, and dry it in the sun. Then take of dryed Chamollotti pods, freed from seeds, 5 s. w., powder them well in a mortar, and rub them for an hour with a little water. Then add two sers of cool water, mix them, put the cotton into the mixture in the mortar, and knead it with the hand for an hour. Throw away the water, and dry the cotton, as impregnated with Chamollotti, in the sun. Dissolve 3 ½ s. w. of alum in 40 s. w. of water, and add 1 s. w. of impure carbonate of soda, which has been dissolved in 10 s. w. of water, and then strained. In this solution put the thread, and rub it with the hands for an hour. Then wring, dry it in the sun, wash it well, and dry it again in the sun. Take 40 s. w. of dry Monjista, powder it with the Dhengki, and boil it in 5 sers of water to 4 sers. Then boil the thread in the decoction for half an hour, wring, and dry it. Then keep it half a day in 1 ser of water, holding in solution 3 s. w. of alum, and wring, and dry again. Then boil 20 s. w. of powdered Monjista in 4 sers of water to 30 sers, and in this boil the cotton for a quarter of an hour. Finally wash and dry the thread.

Thread thus dyed may be changed into what is called Uda, by the following operation. Take 20 s. w. of the dyed thread, put it in 7½ s. w. of the infusion of Chamollotti, stir them with the hand for 24 minutes, then wring the thread, and put it for an hour into one ser of Moski mixed with half a ser of water. Finally wash the thread in cold water, and dry it in the sun. This makes a deep colour, and lighter shades may be obtained by using ¾ or ½ ser of Moski.

The third colour, called Kusom, is not well fixed; but is a bright beautiful light red, like the pomegranate flower. For 20 s. w. of cotton thread take 1½ ser of dry safflower, powder it on a cloth, and wash it, until the yellow colour is entirely separated. Then add by degrees 15 s. w. of impure carbonate of soda (Sajimati) and rub them together for an hour, until they become scarlet. Then put them on the strainer,

and filter water slowly through them, until all the colour is carried away, and keep this infusion of safflower. At the same time put 60 s. w. of tamarinds, freed from the pod, into 2 sers of water, rub them and strain the infusion. Mix the infusions, and divide them into two equal parts. Put the thread into one part for an hour, then wring it, and put it in the remaining half of the infusions for three hours. Then wash, and dry in the shade.

The whole apparatus required in this manufacture consists of a loom, a few sticks for warping, and some earthen pots for dyeing. The loom is exceedingly imperfect, especially the reed and shuttle. The warping is performed by the women, who, taking a spindle in each hand, lay two threads of the length required round some sticks placed upright in the ground, and repeat this, by two and two threads at a time, until the warp is completed.

The Maldiki cloths, consisting of silk warp and cotton woof woven very thin, are manufactured entirely in Maldeh, and the towns on the banks of Mohanonda for 12 miles below; but some of these are in the Puraniya district. The warp is generally disposed in stripes, and the woof is of one colour. The fabric is of two kinds; one called Elachi, where both sides of the cloth are alike; the other called Musru is like satin, one side being different from the other. Both kinds are of a great variety of patterns, which it would be needless to enumerate. The only general distinction in the patterns of both kinds are; 1st, when one stripe is very narrow and the other very broad, the cloth is called Golbudun; 2nd, when the spots and stripes are waved, the cloth is called Katar. There is very little taste displayed in the patterns, and the weavers are very inferior to those of Bangalore. Both have probably been introduced from the northwest of India by the Muhammedan conquerors. The pieces wrought for the Company, or for exportation by sea, are 30 cubits long, and 2 cubits wide. Those made for common sale are 18 cubits long, and from 1¾ to 2 cubits wide; but the pieces rejected by the Company, as unfit for their commerce, are readily bought up by all other merchants. The large pieces sell from 18 to 30 rs., the Katar being about 5 rs. dearer than the others. The small pieces cost from 3 to 12 rs.

The persons in this district who follow this professsion, are said to occupy 2000 houses, and to possess 4000 looms. Every estimate that I received, stated the cloth wrought on one loom to be worth about 20 rupees a month, which would make the annual amount 960,000rs.; but this is certainly too much, and from the apparent poverty in the place, it is probable that a very great number of weavers are without employment; besides almost the whole of the cloth is exported from this district, and the cloth of this kind that is exported, I heard no where estimated at more than 250,000 rs. a year.

About 800 looms are said to be employed in weaving the larger pieces, chiefly in the form of Elachis, and receive advances either from the Company's factory, or from the agents of merchants residing at Calcutta and Moorshedabad. These advances are to the full value of the goods that are to be wrought, and the manufacturers are eager for them, partly no doubt from being secured in employment, but also from the strong bias to anticipate their profits which universally prevails. The Company's advances are always preferred. The remaining looms are employed in weaving the short pieces, generally from 5 to 8 rs. value, and mostly of the kind called Mosru, at least in the country town. At Maldeh the Elachi is chiefly in demand. The short pieces are sold at open markets for ready money, or very often to petty dealers, when they go round the weavers houses, and purchase whatever goods are ready; and the Goswamis or merchants from the west of India purchase a large proportion, it is said to the amount of 100,000 rs.

The raw materials, except some of the drugs used in dyeing, are either the produce of the division of Maldeh, or of the adjacent banks of the Mohanonda, so that nothing farther can be wished on that head for the encouragement of the manufacture. This however is on the decline, and it is said, that 7000 looms were once employed. The decline is chiefly owing to the demand having lessened; but partly also to the attention of the manufacturers having been turned to the weaving of cloth consisting entirely of silk.

Twenty rupees for each loom is reckoned an adequate stock. This will build a house, and purchase a loom, pots, silk, cotton and dyes, sufficient for making one piece. A

man and his wife in one month, can generally weave and dye a piece of cloth worth 20 rs. and may have about 5 rs. profit. If a man is rich, and keeps several looms, he and his wife warp and dye, and persons are hired to weave at the following rates. A long piece of Elachi, worth 18 rs., costs for weaving from 3 to 3½ rs. and is made in from 20 to 30 days, so that the wages are about 3½ rs. a month. A large piece of Mosru, worth 20 rs., costs 4 rs., and takes a month to weave it. Short pieces of Elachi, worth from 3 to 6 rs. occupy from 5 to 10 days, and the weaver receives 2¼ anas on each rupee of the value, so that he makes cloth to the value of 18 rs. a month, and receives about 2½ rs. profit.

The manufacture of cloth made entirely of silk is confined to the vicinity of Maldeh, and seems to have been introduced by a Mr. Henchman, who was commercial resident for the Company at English Bazar. This manufacture injured that of mixed cloth, and this has not recovered since the newly introduced one began to decay, which it seems to have been doing ever since Mr. Henchman left the place. It is remarkable, that the natives have no names to distinguish the cloths made of pure silk, and of silk mixed with cotton; both are divided into Elachis and Mosrus, which when of pure silk we call taffetas and satins; of both there are patterns of the kinds called Golbudun and Katar, which I have already explained. The size of the pieces, and the manner of dyeing, bleaching, weaving, and selling the goods of pure silk, and of mixed materials, are exactly the same. The value of those made of pure silk is rather higher, but not a great deal, perhaps 2 or 3 anas on the rupee. The persons employed in this manufacture may occupy 200 houses. From 20 to 25 good tradesmen make long pieces at from 18 to 30 rs. generally commissioned by the Company's agent; and if required, they could make goods of a higher value. The workmen of about 100 houses are usually employed by private traders, chiefly the Armenians of Calcutta, to make cloth from 10 to 16 rs. a piece; but, if required, could make cloths worth 25 rs.; and when there is much demand, these are sometimes employed by the Company's factory. The remaining 75 houses are occupied by poor workmen, who chiefly make goods, worth from 8 to 12 rs. a piece, which they sells at the markets for ready money. The whole looms may be about 500,

which should be able to manufacture goods to the amount of about 120,000 rs.

The people hired to weave this cloth have rather higher wages than those employed in weaving mixed goods; but are paid in the same manner that fine goods are paid by the piece, and coarse goods by a per centage on the value. Some good workmen make 5 rs. a month, and the usual wages are $3\frac{1}{2}$ rs. The master's profit must be proportionably great. For instance a piece of silk cloth, 18 cubits long by 2 broad, which is worth 8 rs. will cost the weaver for silk $4\frac{1}{4}$ rs., for dyeing $\frac{3}{4}$ r. altogether $4\frac{3}{4}$ rs.; so that he has $3\frac{1}{4}$ rs. profit for his own labour, and that of his wife, and he can easily make one piece in 12 days; so that his profits are at least 8 rs. a month.

The cotton manufacture is of more importance, is more thriving, and is less liable to fluctuation; because by far the greater part of the commodity is consumed in the district, and the weavers would not suffer very materially were the exportation altogether to cease; for at present there is some imported, and it is probable, that were the exportation to cease, the weavers would apply themselves to work in goods that would suit the demand of the neighbourhood.

At Maldeh and in its vicinity are about 120 houses occupied by weavers, who make thin muslin (Molmol), and turbans, and are the only persons in the district, who weave these kinds of cloth. They have from one to seven looms in each house, and the whole looms may be about 360. Most of them are said to receive advances for the Molmols, either from the Company's factory, or from private merchants at Calcutta and Moorshedabad. About one-half of the goods however, including all the turbans, is made for ready money sale. The whole amount may be about 50,000 rs. The goods made on commission are 4 cubits in length by 2 in breadth, contain from 12 to 15,000 threads in the warp, and sell from 12 to 16 rs. Many, which are rejected by the factory, are sold for ready money, at nearly the same rate which the Company give for the best prices. The common goods intended for ready money sale, are about a cubit shorter, about 3 inches narrower, and contain in the warp from 800 to 1000 threads. They usually sell at from 4 to 6 rs. a piece.

The following capital is required for this business; a loom $2\frac{1}{2}$ rs. sticks for warping, and a wheel for winding 2 anas. A

shop 4 rs. thread for two ready money pieces, worth 6 rs. each, 5 rs.; total, 11 rs. 10 anas; to which must be added a month's subsistence. The man and his wife warp, wind, and weave two pieces of this kind in a month, and he has 7 rs. profit, deducting however, the tear and wear of his apparatus, which is a trifle. A person hired to weave can in a month make three pieces of this kind, and is allowed 2 anas in the rupee of their value, which is 2¼ rs. a month. The finest goods cost 2 rs. a piece for weaving.

At Maldeh is one person who weaves cloth, that is flowered in the loom (Jamdani); and two men who weave cotton carpets (Sutrunje); but these may be passed over as of no importance. On asking the weavers of Maldeh concerning the profits of the respective classes, each pretended to be the poorest; but, on comparing the whole it would appear, that at Maldeh and its vicinity, the silk weavers had the highest profits, next to these the weavers of mixed goods, next to these the weavers of muslins, and lastly, plough for loom, the farmers whose usual profits on each plough may be about 40 rs. a year. This is on the supposition, that both looms and ploughs are wrought by persons of the family. A large deduction indeed must be made where servants or journeymen are employed, or where an imprudent anticipation of their resources has induced them to borrow money at an exorbitant rate. Silk weavers, who have four or five looms, and hire journeymen, spend 12 or 15 rs. a month. In these calculations it is taken for granted, that the weaver has regular employment. At present many near Maldeh are destitute, and this is an evil inseparable from the condition of a manufacturer, especially when he works for a foreign market. Indeed this is a kind of employment that deserves less encouragement from governments than it usually receives. At one time the manufacturer is wallowing in riches and luxury, and claims every indulgence that he can imagine, on account of the supposed wealth that he brings to the country. Next year he is starving, and expects that all other considerations should give way to his interest.

Out of Maldeh the number of professional weavers is inadequate to supply clothing for the inhabitants. The whole number may be about 6000 families, who may have 8000 looms. A few of these are employed by different subordinate

agents belonging to the Company's factories at English Bazar (Maldeh) and Rongpoor; but the number has of late decreased; and although the weavers suffer from not receiving the advances to which they had been accustomed, and which had enabled many to involve themselves in debt, there seems to be no want of full employment, and on an average each loom can clear 4 rs. a month for weaving, winding and warping, whether they purchase the thread, and sell the cloth after it is made, or receive the thread from the good women of the country, and weave it at so much a cubit. Both practices are common, and except by the Company no advances are made; but several native traders buy up the pieces that are rejected by the Company's agent, and export them. Each family generally keeps a loom for every man, where the caste is that of a proper weaver; but as many persons of other castes have adopted the profession, some brothers of such families cultivate the grounds, and others weave; no person however, that I have included in the list of weavers, does both. The value of the thread which each man may weave in a month, will be about 8 rs. making the whole value of the cloth 144 rs. a year for each loom, which on 8,500 looms (including those in Maldeh) amount to 1,224,000 rs.

The cloths chiefly made for exportation, by means of the Company's factory near Maldeh, are Tonjebs, or plain white muslin about 4 cubits long by 2 cubits or 2¼ broad, and containing from 1,100 to 1,300 threads in the warp, and which sell at from 6 to 9 rs. a piece. A few thicker cloths called Baftas are made for the factory at Rongpoor.

The cloths which the weavers make for the natives, are dresses of thin muslin, generally with red-blue on white borders, and which sell at low prices, being very short. Pieces of 10 cubits by 2 sell for from 1½ to 2 rs. A great number both of the low Hindu and Muhammedan farmers have a loom in their house, and both men and women work at it when they have leisure, and make coarse thick cloth, such as Gozis and Goras, of which the total value may be 450,000 rs.

The whole cotton cloth therefore, woven in the district may amount to 1,674,000 rs. of which 140 or 150,000 are exported, leaving about 1,514,000 for consumption. The cotton thread spun in the district has been estimated at 1,165,000 rs. allow

65,000 to enter into mixed cloth, the profit of the weavers of cotton will be about 574,000 rs.

The next most important manufacture of cloth is that which is made from the Pat, or *Corchorus capsularis*, and is almost entirely wrought and spun by the women of the low Hindu castes called Konch, Polya and Rajbongsi. The very coarse kind of linen called Megili is the common dress of these poor people, and it is woven in the same way with the coarse cotton cloths, which I have lately mentioned. Most families have a loom, and the people, especially the women in the afternoons, work a little occasionally, and this serves to clothe the family, so that it is seldom sold. The pieces consist of three or four narrow cloths sewed together, are 4 or 5 cubits long and from 2 to 3 cubits wide, and are worth from 2 to 8 anas each. Some have red or black borders. It is said to be much more durable than cloth made of cotton, and strongly resembles the coarse linen that is made of flax. The annual value of the Megili, that is woven in this district may be about 100,000 rs.

The coarse sackcloth called Chote, is a more valuable manufacture from the same material. This sackcloth is made of three kinds, and is always woven in pieces from ¾ to 1 cubit wide, of which two or three are sown together into one piece, before it is sold.

The first kind intended for bedding is 4 or 5 cubits long, and from 2¼ to 3 cubits wide, and sells at about 8 rs. for 100 pieces. Secondly, that intended for covering bales of cloth is of the same dimensions, but is thicker than the former kind. The 100 pieces cost from 6 to 10 rs. Thirdly, that intended for making rice and sugar bags is 4 cubits long and 1½ or 1¾ cubit wide, and 10 bags cost 4 or 5 rs. Some of the second kind is purchased for the Company's factory at Maldeh; but this forms an inconsiderable part of the whole. The great demand is for rice and sugar bags; but for these 50,000 rs. worth are brought from the Rongpoor district, and perhaps 100,000 rs. worth are made here. Those for bedding may be worth 50,000 rs., and those for package 10,000 rs., making the value of all manufactured in this district amount to 160,000 rs.

The manufacture of Pat is carried on entirely by females.

A woman, in the course of the month, besides beating some rice, or preparing Chira in the morning, and taking care of her family, can make two or three pieces of Megili, each worth 3 anas, of which the material will be one-half, and her gain will be 3 or 4 anas. The materials produced in the country are not sufficient for the demand, and large quantities are imported from the north-east.

The cloth made of Arendi, or the silk of Ricinus, is of little importance, and is seldom brought to sale. The people who rear the worms have the cloth wrought for their own use. The pieces are from 3 to 5 cubits long, and from 2 to 3 cubits wide, but have a seam in the middle, and are worth from 8 to 12 anas. About 10,000 families may rear worms, and make each from one to three pieces in a year, so that the total value made annually may be about 10,000 rs.

The flowering cotton cloth, with the needle, has given a good deal of employment to the Muhammedan women of Maldeh, for the needle has never been used by the Hindus; women, who work at this employment, are called Butadars, and the patterns are divided into two kinds, Kosida and Chikon. The former have running patterns; the latter are in detached flowers, or spots, and are the kind most commonly made at Maldeh.

One of the women says, that in the town there are about 500 families who work at this business. They only flower the cloth that is given to them by manufacturers, and never stand the chance of purchasing cloth, flowering it, and then offering it for sale. Before the women receive the cloth, it is stamped with the pattern, which is done by men, and the stamps are cut and designed at the place. The Company's factory formerly employed many women, and gave from 3 to 4 rs. for flowering a piece 20 cubits long by 2 broad. A woman could flower a piece in two months, so that she could gain from 1½ to 2 rupees in that time, and they are anxious for the factory's work, as the employment is regular. The merchants, indeed, who now employ the women to flower coarse muslin, worth from 4 to 8 rs. a piece, give good wages, but their demand being irregular, the women do not make above one rupee a month. If, indeed, the employment were constant, a clever woman could every month flower one piece, and the rate is from 2 to 2½ rs. a piece. On the whole, the

value of this manufacture may at present be estimated at 500 rs. a month, or 6000 rs. a year.

At Dinajpoor about 31 families of Muhammedans (Patoyar) are employed in making silk strings, which are used for tying trowsers, or for necklaces and bracelets. Some of these consist of net-work, others are plaited, and all are adorned with tassels. The work is not so neat as in most places of India, for in general it is very beautiful. At Dinajpoor are 17 families who make chintz, but I had no opportunity of seeing their operation. Their capitals may be from 5 to 10 rs. for materials, besides their house, and they live like dyers. The cloth that they print is chiefly brought to them, and printed at so much a piece, and is in general half worn before it comes into their hands. None is exported.

Among all these artists, except some of the weavers, who make coarse cloth for their own use, there are few or no persons who cultivate the ground at one season, and work at their profession during the remainder of the year. Many, it is true, rent lands, but they cultivate these chiefly by means of persons who labour for a share of the crop; although sometimes, also, servants are hired for the purpose. I have already explained the reason why this practice is common. On the whole, the artists in general live as comfortably as small farmers, and their condition will finally improve, if advances are gradually discontinued. In the meantime, from the too sudden withdrawing of the capital formerly employed in that way, they have suffered great inconvenience, and sometimes even distress; but there can be no doubt that the system of advances is in itself ruinous to both farmers and artists, as, conjoined with the usual imprudence of mankind, it is an effectual means of preventing the accumulation of capital in their hands, and without this accumulation it is utterly impossible that they should possess any independence or ease.

The manufacture of sugar is one of the most important in this district, and some of its productions have not yet been fully examined by chemists, being somewhat different from those procured in Europe. I shall therefore give a detail of the different processes at considerable length, and leave the properties of the different articles for future investigation. The manufacturers of sugar purchase the extract, or inspis-

sated juice of sugar-cane (Gur) from the farmers, and in general prefer that which is little inspissated, and which is called Royadar, or Danadar, from being of a granular consistence, and Motki, Kundo, Hangra, from its being brought for sale in pots. As this, however, cannot be conveniently brought from a distance, some of the extract (Gur), called Dhima from being formed in cakes, or Chaki from being formed in square masses, is also employed.

I shall first mention the buildings necessary for the operation. The boilers are of two sizes, one adapted for making, at each operation, about 540 Calcutta sers, or 1105 lb.; the other boils 464 sers, or 950 lb. The former weigh about 600 lb., and the latter 490 lb. This will contain about 2672 lb. of water, or about 42¾ cubical feet, reckoning 1000 ounces to the cubical foot. It is in shape of the segment of a sphere, 9 feet in diameter at the mouth; the other is larger in proportion. The boiler is sunk into a cylindrical cavity, in the ground, which serves as a fire-place, so that its edge is just above the floor of the boiling-house. The fuel is thrown in by an aperture close to one side of the boiler, and the smoke escapes by a horizontal chimney, that passes out on the opposite side of the hut, and has a small round aperture, about 10 feet distant from the wall, in order to lessen the danger from fire. Some manufacturers have only one boiler, others as many as four; but each boiler has a separate hut, in one end of which is some spare fuel, and in the other some bamboo stages, which support cloth strainers, that are of use in the operation. This hut is about 24 cubits long, and 10 broad; has mud walls 6 cubits high, and is raised about 1 cubit above the ground. For each boiler are required two other houses; one, in which the extract of sugar-cane is separated from the molasses by being strained, is about 20 cubits long by 10 wide. The other, that is about 30 cubits long by 8 wide, is that in which, after the extract has been strained, boiled, and clarified, the treacle is separated from the sugar, by an operation analogous to claying. Each sugar manufacturer has besides, a warehouse, the size of which is in proportion to the number of boilers. The walls of these three last huts are clay; and under the thatch, in order to diminish the risk from fire, they have a roof terraced with the same material. The floor of

the warehouse is raised 2 cubits above the soil. The whole premises are surrounded by a high wall of mud.

I shall now detail the most simple process by which the sugar is procured from the pot extract, as performed in a small boiler at Bodolgachhi, and by which the sugar called Badol, in the neighbouring markets, is procured.

Take 640 sers (58 s.w. or $1\frac{488}{1000}$ lb. the ser) of pot extract; divide it into 4 parts; put each into a bag of coarse sackcloth (Choti); hang these over an equal number of wide-mouthed earthen vessels, and sprinkle a little water on them; there will drain from the bags 160 sers of a substance called Math by the natives, and which I consider as analogous to the molasses that flow from the hogsheads in a curing-house of Jamaica. The remainder in the bags is called Sar, and is a kind of coarse Muscovado sugar, but is far from being so well drained and freed from molasses as that which comes from the West Indies. Put the 480 sers of this substance into the boiler with 180 sers of water, and boil them briskly for 144 minutes. Then add 120 sers of water, and boil 48 minutes more. In the meantime strain 60 sers of water through an earthen pot with some holes in its bottom, which is covered with straw, and over this the pot is filled with ashes of the plantain-tree. Four sers of this clear alkaline solution are added to the boiling sugar and occasion a thick scum, and this is removed. After 24 min. 3 sers of alkaline solution and one-fourth ser of raw milk are added, and the boiling and scumming are continued 24 minutes. This must be repeated from five to seven times, until no more scum appears. Then add 160 sers of water, take out the liquor, and put it into a number of strainers. These are bags of coarse cotton cloth, in form of inverted quadrangular pyramids, each of which is suspended from a frame of wood about two feet square. The operation of straining occupies about 96 minutes. The strained liquor is divided into three parts. One of these is put into the boiler with from one-fourth to one ser of alkaline solution, $\frac{1}{16}$ ser of milk, and 9 sers of water. After having boiled for between 48 and 72 minutes one-half ser of milk is added, and the liquor is poured in equal portions into four refining pots. These are wide at the mouth and pointed at the bottom, but are not conical, for

the sides are curves. The bottom is perforated, and the stem of a plantain leaf forms a plug for closing the aperture. The two remaining portions of the strained liquor are managed in exactly the same manner, so that each refining pot has its share of each portion. When they have cooled a little the refining pots are removed to the curing-house, and placed on the ground for 24 hours. Next day they are placed on a frame, which supports them at some distance from the ground. A wide-mouthed vessel is placed under each to receive the viscid liquor that drains from them, which seems to be analogous to the treacle of the European sugar-houses, and which by the natives is called Kotra, Chite, and Rab. In order to render the separation of these more complete, moist leaves of the *Valisneria spiralis* (Pata) are placed over the mouth of the pot to the thickness of two inches. After remaining 10 or 12 days these are removed, and a crust of sugar, about half an inch in thickness, is found on the surface of the boiled liquor. The crust is broken and removed, and fresh leaves are repeatedly added until the whole sugar has formed, which requires from 75 to 90 days. The sugar procured is usually 144 sers of 72 s.w. or $178\frac{4}{5}\frac{4}{8}$ sers of 58 s.w., and the treacle is about 300 sers, so that in scumming and straining the boiled liquor very little is lost, or at least the loss is compensated by the water in the molasses and treacle, for the 160 sers of molasses strained from the extract before it was boiled must be also considered as part of the produce. When cake extract is used it does not require to be strained before it is put into the boiler, but 480 sers of it are broken to pieces, and put at once into the boiler with 80 sers of water, and are then treated exactly in the same manner as the Sar, or strained pot extract. The produce is reckoned to be usually 96 sers of sugar at 72 s.w. the ser, or $119\frac{1}{5}\frac{0}{8}$ sers at 58 s.w., 300 sers of treacle, and near 61 sers of scummings and strainings.

At Bodolgachhi and some other places it is not usual to carry the manufacture any farther. All sugar is considered as equally good, and the molasses and treacle are sold in that state. The former is used in several kinds of sweetmeats that are consumed by the poor. The treacle is used in preparing tobacco for being smoked, but the poor often use it in sweetmeats. Both may undergo farther operations from

the boiler, but at Bodolgachhi these are not usually performed. I shall now therefore state the accounts which I received from a manufacturer of the profit and charge of the operation conducted in the manner which I have just now described.

CHARGE.—The boiling-house, 50 rs.; the curing-house, 50 rs.; the straining-house, 30 rs.; the warehouse, 45 rs.; the fence by which these are surrounded, 25 rs.; the iron boiler, 96 rs.; to pots of various kinds, 38 rs.; to sackcloth for strainers, 3 rs.; to cotton cloth for ditto, 1 rupee, 8 anas; to bamboos, 1 rupee, 8 anas; to ashes of the plantain-tree, 8 rs.; to milk, 9 rs.; to mats on which the sugar is dried, 5 rs.; to planks, ladles, &c., 1 rupee; to ropes and flax (Pat), 2 rs ; to fuel (reed called Birna), 125 rs. To servants.—One Gomasta or agent, who also receives a commission on the extract from the cultivators, at 4 rs. per m. for 12 m., 48 rs.; one watchman and messenger for 12 m., 24 rs.; to one head boiler for 5 m , 25 rs.; to 4 under boilers for ditto, 30 rs.; to 1 weigher and strainer for ditto, 10 rs.; to 4 workmen for ditto, 32 rs.; to 700 *mans* of cake extract, at 1¼ rupee; to 500 *mans* of pot extract, at 1½ r., 750 rs.; deduct the value of the buildings and apparatus at the end of the year, 100 rs.; total, 2184 rs. Produce.—By 700 *mans* (41,664 lb.) of cake extract (the ser 59 s.w.), 140 *mans* (72 s.w. the ser, or 10,344 lb.) of sugar, at 6 rs, a *man*, 840 rs.; by 500 *mans* (or 29,082 lb.) of pot extract, 112½ *mans* or (8312 lb.) of sugar, at 6½ rs., 731 rs. 4 anas; by 800 *mans* (or 47,615 lb.) of molasses and treacle, at ¾ r., 600 rs.; loss, 12 rs. 12 anas; total, 2184 rs. The apparent loss here arises from the estimate having been formed on what happened last year, when the crop was unfavourable, and the price of extract high. In usual years no cake extract is made into sugar, and the price of the pot extract, by the *man* of 58 s. w. the ser, is seldom so high as 1¼ rupee. Then the charges will be—to sundries, 659 rs.; to 1200 *mans* of pot extract, at 1¼ rupee, 1500 rs; deduct apparatus, 100 rs.; total, 2059 rs. Returns.—270 *mans* sugar, at 6½ rs., 1755 rs.; 800 *mans* molasses and treacle, 600 rs.; profit, 296 rs.; total, 2059 rs.

This profit is probably somewhat underrated, and in this country would be a return totally inadequate for a capital of 2000 rs.; but it will be seen in what manner this is made up to the manufacturer. The sugar made in this part of the country is called Badol, and is reckoned the best in the district. I shall now detail another account, and fuller process. It was given by a manufacturer of Chintamon, who, owing to the failure of the crop last year, had given up business, as his capital was small, and he could not make advances until he recovers what has been already advanced, which may never be the case, at least so he seemed to think. He was on this account less liable to depart from truth in his account. All his weights are of the Calcutta standard, or 80 s.w. for the ser. The extract is all of the pot kind, and, in straining it through the sackcloth, one-half comes away in molasses or math, whereas at Bodolgachhi a quarter only drains through

the bags. To what circumstance this difference is owing I could not ascertain, whether to the juice having been less evaporated than at Bodolgachhi, or whether the manufacturer of Chintamon applies more water than is done at the last mentioned place. The operation is nearly the same, only the sugar that is obtained by the two first applications of the leaves is kept separate from that procured by the third application, which is considered of an inferior quality. Every *man* or 40 sers therefore gives 20 sers of molasses, 7½ sers of sugar of the first quality, 2½ sers of the second quality, and 5 sers only of treacle, while 5 sers are lost in scumming. The quantity of treacle is diminished in proportion to the increase of the molasses. The custom near Chintamon is to prepare the molasses by boiling them three days, from morning until night. The quantity by this inspissation is reduced in the proportion of three to five. When this has been accomplished the inspissated molasses are poured into pots, each containing 1½ *man* or 123¼ lb., a small quantity of sugar (one-sixteenth part of a ser), and an equal quantity of pot ash are put into each pot, and the contents are stirred about diligently with a stick until they become cool. It then forms a substance called Khangr, which sells at from 5 rs. to 5½ the pot. Every year one furnace could boil 1500 *mans* of pot extract, although many manufacturers do not boil more than 1000 *mans*, not being able to procure a greater quantity. The following estimate will show the produce of 1000 *mans*, or a little more than 82,000 lb.:—

To 187½ *mans* of fine sugar, at 7½ rs., 1406 rs. 4 anas; to 62½ *mans* of coarse sugar, at 4¼ rs., 265 rs. 10 anas; to 200 pots of inspissated molasses, at 5 rs. a pot, 1000 rs.; to 125 *mans* of treacle, at 1 r., 125 rs.; total, 2796 rs. 14 anas. The expense as stated by the same person.—1 agent or accomptant 12 m., 42 rs.; 1 weigher and messenger 12 do, 15 rs.; 1 head boiler 4 do., 16 rs.; 2 scummers, do., 10 rs.; 2 men to supply fuel, 8 rs.; 2 strainers, 10 rs.; 2 curers, 12 rs.; wages, 113 rs; potash, 8 rs.; milk, 15 rs.; fuel, 120 rs.; pots, 24 rs.; cotton cloth, 2 rs.; sack-cloth, 2 rs.; bamboos and ropes, 4 rs.; porters, 12 rs.; total, 187 rs.

The houses and boiler cost about 400 rs., of which one-half should be deducted for interest, tear and wear, and insurance. The total expense will be—

Servants, 113 rs.; sundries, 187 rs.; buildings and repairs, 200 rs.; 1000 *mans* of extract, 1500 rs.; total, 2000 rs.

The profit, therefore, is 796 rs. upon a capital of 2000; but owing to the very great fluctuations in the market this is

liable to great variations. The price of the sugar, January 1808, is very high. The merchants refuse to take advances at $5\frac{1}{4}$ rs. for the *man* of 72 s.w. the ser ($73\frac{885}{1000}$), and stand out for 6 rs., although the extract is very cheap, being below what I have stated as the common price. Indeed, if the estimate above given be accurate, they could not afford to sell it for less. The sugar of this division, called Phulvari from the name of a Pergunah, is reckoned to be of the second quality in this district.

There is another method practised, although I have not been able to procure any satisfactory account of the quantity of each article produced. The manufacturer follows the same method as usual, and applies the weed three times, at each time from 20 to 25 days. All the sugar procured by this manner is of the same quality, if the weed is allowed to remain a sufficient length of time. It is only when a short time is allowed that the third cake is of an inferior quality to the two first. After three applications what remains in four pots is collected into one, and treated a fourth time with leaves, and then produces some sugar of the best quality. This process goes on until the rainy season puts a stop to making sugar of the first quality. Then the Kotra or treacle is boiled down to the thickness of pot-extract, and is mixed with an equal quantity of that substance, and is treated just as the pot extract was by itself; this gives sugar of a second quality. The treacle from this is again treated in the same manner, and with the addition of an equal quantity of pot extract yields sugar of a third quality. The treacle from this is inspissated, and then treated as extract without receiving addition, and gives a coarse kind of sugar called Buti.

The following was given as the produce of 1000 *mans*, at 90 s.w. the ser, or of 1250 *mans*, of 72 s.w. the ser:—

To 125 *mans* of 1st sugar, at 6 rs., 750 rs.; to 75 do. of 2d do., at $5\frac{1}{2}$ rs., 412 rs.; to 50 do. of 3d do., at 5 rs., 250 rs.; to 25 do. of 4th do., at 4 rs., 100 rs.; to 833 24-72 do. of molasses, at 1 r. per *man*, of 60 s.w. the ser, or 1000 *mans*, 1000 rs. The price of the extract at $1\frac{3}{4}$ r. the *man* of 90 s.w. the ser, should be, 1750 rs.; total 762; deduct expense, 500 rs.; profit, 262 rupees.

Near the Korotoya the sugar is chiefly manufactured in this manner, and is called Ghoraghat sugar. It is reckoned the worst in the district.

The number of sugar manufacturers amounts to 141, and

the boilers, which they employ, were stated to be 225. These, on an average, boil each 1,000 *mans* Calcutta weight, or altogether 225,000 *mans*. The sugar may amount to about one-fourth of this weight, or 41,219 cwt., and may be worth 337,500 rs., or a little more than 8 rs. a cwt. The molasses and treacle may be about two-thirds of the weight, and may be worth about 150,000 rs. The raw material is produced in much greater quantity than the manufacturers consume; and by far the greater part of the sugar, and a large proportion of the molasses and treacle are exported.

All the manufacturers (Goldars) are natives, and most of them are men of considerable wealth. Three or four thousand rupees, for each boiler, is the smallest capital that can carry on the business, and very few have borrowed money. Some live in a very decent manner like landholders, and some indeed have purchased considerable landed estates. A principal part of their profit arises from advancing money to the cultivators, from whom they procure the extract. The farmers who want advances, in the end of June or beginning of July, apply to a manufacturer, who sends a person to inspect the cane. The terms having been then settled, a Kundo-Khalasi or release is procured from the landlord, who accepts of the manufacturer's security for the rent in place of his hypothec on the crop, and the manufacturer becomes bound to pay the whole money, that is to be advanced, by four instalments into the hands of the landlord. In general this is sufficient to pay the whole rent of the farm. It is usual to advance from 12 to 15 rs. on the bigah, that is equal to half an acre. The extract is received in payment at $\frac{1}{16}$ below the harvest market price, which the manufacturers keep low, as no one bids until this has been arranged. The manufacturer besides receives in extract the value of half an ana for every rupee advanced; and, when the account is closed, from $1\frac{1}{4}$ to $3\frac{3}{4}$ anas on the rupee by way of interest. He therefore on the whole receives from $2\frac{3}{4}$ to $3\frac{1}{4}$ anas on each rupee, that he has advanced, or from 17 to 20 per cent. Both landlords and farmers are desirous of dealing with the sugar manufacturers.

The Company occasionally takes some of the sugar, and a little is bought by petty traders for the purpose of retailing in the country; but by far the greater part of the sugar, and much of the molasses and treacle, are exported to Moorshe-

dabad and Calcutta, on account of the manufacturers, who dispose of them by their agents.

Manufacture of Indigo.—This manufacture has been entirely introduced by Europeans; for although a dye has long been prepared by the natives of India from the indigo plant, yet no sooner had the plant been carried to America, than the dye manufactured by European skill totally supplanted the Indian kind in our markets, and it is only the same skill, that has restored this manufacture to its original country. Whether or not the European dyers have used judgment in rejecting the original and cheap manufacture of India, I cannot say; for a great many considerations, which at present I have no means of investigating, must be previously weighed; but there is no doubt that the dye produced by the Indian kind is perfectly good. The process, which is used by the Indian dyers with success, in extracting the dye from their own kind, would according to them produce no effect with the drug prepared after the European method; the Indian drug is therefore equally effectual, and probably easier wrought than the European; but the quantity of it required for a given quantity of thread is much greater, the freight on the same value would be much higher, and therefore it may be doubted, whether on the whole it would in Europe be a cheaper dye. It may be also doubted whether it would keep as well in long voyages. The difficulties that are in the way of the manufacture, while carried on by Europeans, are so great, that if the Indian kind would answer equally well, great advantage would arise from diverting European enterprise and capital to other pursuits, for which they are better fitted.

Until however the experiment has been fairly tried; and it has been shown to the satisfaction of the English dyers, that the drug prepared after the Indian fashion is equally advantageous with that prepared after the European method, which may never be the case, this manufacture is of great importance, and deserves encouragement so far as to supply the British market. How far the manufacturing for exportation to foreign markets, may be advantageous either for the public, or for individuals is doubtful. The state of markets becomes in that case so uncertain, that many are ruined, and in fact there is reason to think, that upon the whole more

has been lost in this manufacture than has been gained, especially in this district, where it never has thriven.

The machinery at first was expensive and ill adapted for the purpose, but considerable improvements have been made, both in reducing the expense, and in perfecting the operation. The following is an account of the works necessary in a small factory consisting of two vats.

First, a well, tank or canal for supplying water. In some parts of this district the water is found abundantly in wells, at a very little depth from the surface; and in such cases this seems to be by far the best method of procuring water, because the supply is more certain. Many situations, however, do not admit of wells, and recourse must be had either to tanks, or to canals from rivers. The supply from the former, unless the tank is very large, or contains numerous springs, is very uncertain, and sometimes fails, so that the whole crop is lost. The supply from rivers is more regular; but at times the water sinks so far beneath the level of the works, that the raising it is attended with great expense. In a level country raising water is always attended with a considerable expense. Pumps answer very well in point of effect; but they are very liable to require repair, and native artists want skill; so that the works, in which pumps have been employed, have often been at a stand; and more simple machines are therefore in general preferred. The best that I have seen is a wheel moved by people walking on its inner circumference, like the wheel of a crane. The water is raised by buckets fixed to a rope, which passes round a barrel on the axis of the wheel, and these empty their contents as each arrives at the summit. One constructed by Mr. Tucker has cost only 60 rs. can be easily repaired, and raises a great deal of water. It is also occasionally liable to go wrong, and in such cases may stop the works for a day or two. Some people therefore prefer raising the water by buckets with ropes passing over a pulley. On the whole I am persuaded, that the introduction of the lever (Yatam or Pacota) of Madras, or the leathern bag wrought by oxen on an inclined plane, as used in the west and south of India, would be a great improvement.

From the well the water should pass along a channel into a reservoir. Both channel and reservoir should be built of

brick, and covered with plaster. The channel, like all the others in the works, should be of considerable length to allow sufficient room for all operations. The reservoir should have walls about two or three feet high, and should be large and shallow, so that impurities may quickly subside, and that as much of the water as possible may be exposed to the sun and air; which Mr. Tucker has found to be of great advantage. The reservoir should be of a size sufficient to contain as much water, as will at once fill the vats, by which means the operation goes on more equally and quickly, and this last circumstance in every part of the operation is a principal means of rendering it perfect, the drug, *cæteris paribus*, being always better in proportion to the quickness with which it has been made. The cock, by which the water is drawn from the .reservoir, should be at some distance from the bottom, in order to allow the heavy impurities to be entirely separated.

The steeping vat or vats are constructed like the reservoir, being built of brick lined with plaster, open above, and having walls about three feet high. The dimensions now most usually employed are 20 feet by 30. They are filled with water by means of a brick and mortar channel, which communicates with the reservoir; the cock of the reservoir must of course be above the level of their upper edge. In these vats the indigo weed is infused, and the infusion is assisted by a fermentation, and much of the success of the operation, no doubt, depends on this being properly conducted. The vats, which Mr. Tucker employs, are very shallow, and are not covered above. The first circumstance may be of use, by giving a greater exposure to air; but I suspect, that the latter is an ill judged economy. A heavy fall of rain would, no doubt, in some measure check the fermentation, and the difference between a clear sun shine day, and cloudy weather would have strong effects; and although the fermentation might not be altogether stopped, the uncertainty of the time, from the difference of circumstances, will no doubt render the whole operation more uncertain. A simple shed, therefore, to exclude sun and rain, I have no doubt, should be added to the steeping or fermenting vats, but a very free circulation of air is necessary.

It is of great importance that the plant should be brought

to the steeping vats as fresh from the field as possible; for whatever has heated becomes totally unfit for use, and this is a strong additional reason why the whole land cultivated with indigo ought to be compact and contiguous to the works. The vat having been filled with weed, bamboos are laid over it, and across these are laid beams, in order to prevent it from floating. The reservoir is then opened, and the water is allowed to run into the vat, until the weed is just covered. The infusion and fermentation is completed in from 12 to 16 hours, and the skill of the manufacturer is required to determine, when this has been accomplished. When the superintendent judges fit, the infusion is drawn from the weed by a plug near the bottom of the vat, and is allowed to flow into the beating vat.

The beating vats are made exactly like those used for steeping the weed, and should be nearly of the same size, for according to the present system, the shallower the infusion is in them the better. The object to be attained in the vats is to impregnate the colouring particles, that are suspended in the water with oxygen, by which it becomes insoluble in water, and unites into a solid substance, called fecula by the artists. The means of attaining this is to mix the air and infusion together as much as possible, and the larger the surface is, this is so much the easier performed by the method now employed. Formerly a complex machinery, called beaters, was used for agitating the infusion, and thus mixing it with air; but a much simpler method is now followed. A number of naked men or boys go into the vat, and run backwards and forwards, beating the infusion with a wooden implement called Phauri, see drawing No. 35.

The following rule is observed by Mr. Tucker for judging when the vat has been sufficiently beaten. Dip a bit of cloth in it, and after the clear water has run off a thicker liquid of a brown colour will begin to drop; receive some of this on a white plate, and add a little lime water. If the colour changes in the least to green, the beating must be continued; but if there is no tinge of green, then the beating has been sufficient; no injury, however, arises from a little too much.

Pure indigo is a substance as light, or even rather lighter, than water, and could not even be separated from that, in which it is suspended, by any means so readily, as by adding some

heavy substance, for which it has an attraction. The substance used is lime dissolved in water, of which a quantity is put into the vat, after its contents have been properly beaten, that is after the dyeing material has become a proper oxoid. The quantity of lime water must be left to the judgment of the operator, no rule having yet been discovered for ascertaining what is proper. This is mixed by a few turns of the people through the vat, and the fecula, or indigo is allowed to subside, which it will do in about an hour. The beating vat should have three cocks, one above the other, by which the water, as it becomes clear or pellucid from the subsiding of the indigo, is to be drawn. The lowest, it is evident, must be at some distance from the bottom in order to prevent the indigo from escaping. When the indigo has in this manner been drained as much as possible, it is collected by means of coarse towels into a well on the outside of the vat, and is from thence put into a boiler.

The boiling and pressing house must be covered, but a thatched shed is well suited for the purpose. The boiler is a square furnace of brick, which in the centre contains a large cauldron of iron. In this the indigo is inspissated by a little boiling, which also probably contributes to give the particles a stronger tendency to cohere. After having been boiled for a sufficient length of time, the moist indigo is poured on a draining table, which consists of transverse bars surrounded by a ledge. The table is covered with a cloth, on which the boiled indigo is poured, and the greater part of the water drains through the cloth. The indigo is then put in boxes, that are perforated with holes, and which are lined with a cloth, that is brought over the indigo, so as to cover it on all sides. These boxes are placed under presses, and the water is squeezed out as completely as possible, so that the indigo is left in a mass like a square cheese. The presses used, as in making cheese, are of two kinds, screws and levers. The screws are more convenient as occupying less room, and as being easily employed; but the pressure by them is constantly diminished, as the water runs off; so that the levers ought to have the undoubted preference, as the pressure by them is uniform, which is a matter of the utmost consequence for completing the coherence of the particles.

The masses of indigo, having been taken from the press,

are cut into cubes of three inches, and for the convenience of packing, it is of importance, that the size should be as uniform as possible. The cubes should be sprinkled with wood ashes, which prevent flies from laying their eggs; and, until perfectly dry, they should be exposed to the free air in single rows placed on bamboo stages. The pieces are then brushed, and packed in boxes for market. The house, in which the indigo is dried, or the curing house, as a security against fire, should be of brick, with numerous doors to admit the air; but many manufacturers content themselves with a thatched building. Mr. Tucker was so good as to favour me with the following estimate of the expense of an indigo work, capable on the above plan of making 100 *mans*, of indigo in one year.

To buildings and utensils, 2500 rs.; to 20,000 bundles of weed (six feet circumference) at 10 per r. 2000 rs.; manufacturing charges, such as cloth, boxes, fuel, labourers, at 2 anas a bundle, 2500 rs.; servants employed the whole year, 600 rs.; loss by bad debts, 500 rs.; to which I must add the remuneration due to the superintendent, 3600 rs. Total 11,700 sicca rs.

This is the least stock required; but in calculating the profit, we must deduct from this charge the value of the buildings and utensils at the end of the year, which may be 1700 rs. There will remain 10,000 rs. Add interest at 12 per cent. on the stock, and the charge will be 11,404. Now indigo at Calcutta may usually sell at 140 rs. a *man*. The profit therefore will be 2696 rs. But this is the appearance of affairs in good years. When the crops fail a great part of the charge is incurred, and the return is next to nothing. I know that a higher value than what I have stated is generally put on the indigo at Calcutta; but this high price is merely nominal. The whole indigo cannot be sold at this rate, and the manufacturer is tempted to send his indigo to London on his own account, and borrows money on the credit of what he sends; when all accounts are settled, I believe, it will in general be found, that what I have stated is rather above the true price.

The manufacturing and selling the indigo are, however, the easy and comparatively agreeable parts of the business. It is the procuring the plant or raw material, that is attended with a trouble, vexation, and disappointment so great and incessant, that I am astonished how any person can

labour through the employment. The manufacturers have in general given up cultivating the plant, the frauds, indeed, and extortions, to which every man cultivating on a large scale must be exposed in this country, seem to render this plan unadvisable. They therefore have had recourse to purchasing the weed from the farmers; but the difficulties in this way also are numerous. In the first place each farmer will only cultivate to a very small extent; so that the space, in which weed sufficient for making even 100 *mans* of indigo is raised, will extend for some miles. In the next place the farmers will not undertake the cultivation without receiving, in advance, nearly the expected value of the whole crop; and, after having received the money, they are very careless in the cultivation, or in the payment of what deficiencies arise either from their want of care, or from the uncertainty of season. The ploughing, sowing, weeding, and watching the crops, are in fact very generally neglected, unless the manufacturer employs people to watch over the farmers, and disputes naturally occur between these two classes of people, so that there is no end to the squabbles and petty suits that arise, unless where the manufacturer takes the law into his own hands, and quashes all disputes by force, which, it is alleged, is sometimes done. Yet at looking into the nature of the agreements everything would appear easy.

When a factory is first established, the manufacturer usually assembles the most wealthy farmers (Mondols) of the neighbouring lands; and from the accounts, which they give of the population and nature of the soil in their respective subdivisions (Mauzas), a conjecture is formed how many bigahs of cultivation may be obtained in each, and upon this calculation money is advanced to these principal farmers, who give a duly attested receipt, promising to divide the amount among the smaller farmers in such a manner as to procure the greatest quantity of properly cultivated land. A few days commonly after this transaction, each principal farmer, that has received advances, delivers in a formal written agreement called a Satta, by which he binds himself under a specified penalty to distribute the money, to procure the cultivation of the number of bigahs, for which he has received advances, and to give every facility and assistance to

the manufacturer in endeavouring to have the cultivation properly conducted. The Satta also specifies all the labour which the farmer is to perform, such as ploughing, sowing, and weeding, and the price, which he is to obtain for his plant, and seed. This agreement is sometimes not executed, until the contracting farmers have distributed as much of the advances as the other farmers will receive, and then it is accompanied with a paper called Tayedad or rule, which specifies the sum of money received in advance by each farmer, and the quantity of land, which he has agreed to cultivate. It is generally understood, although not expressly mentioned, that the contracting farmer is to receive one-sixteenth of the produce. This commission is paid sometimes entirely by the farmer in produce, sometimes entirely by the manufacturer, and sometimes each pays a half; but this is always previously settled. In fact nothing is left undetermined, and there is written evidence for almost every part of the contract.

So far in general everything goes on smoothly; but now the agents of the manufacturer must see, that the quantity of land agreed for has been ploughed, sown, weeded, and watched, otherwise the want of faith, that too much prevails in this country, would occasion a general neglect of these duties, the advances having removed the farmer from immediate danger of starving, the only adequate inducement for labour. If the cultivators have not seed, this is sent from the factory to the contracting farmer, by whom it is distributed, to be repaid at harvest, at a rate fixed by the agreement. When the crop is ripe, it is cut by the cultivator, and usually carried to the factory at the expense of the manufacturer, and the cultivators attend to see it measured, and the amount regularly entered in the books of the factory. When the crop season is over, the farmers assemble, and settle their accounts. If the season has been favourable, they receive a balance; but, if it has been unfavourable, or if they have taken too large a sum in advance, they owe a balance, and it is generally alleged, that almost every farmer sooner or later falls into arrears. When any balance is due by the manufacturer it is always paid immediately, together with new advances for the next season. The balances due by the cul-

tivator, accumulated of course with interest, are considered as a part of the advances for the next year, and in old established factories eight or ten neighbours are commonly required to be mutual security for each other, as each individual would no sooner be involved in difficulty, from his imprudent use of the money received in advance, than he would abscond; but eight or ten men cannot readily go at once, and those, who staid behind, would be instantly seized; they therefore watch each others conduct, and give notice if they suspect that a neighbour is about to absent himself.

At the first commencement of a factory, the advances can only be made through the agency of contracting farmers; but as great evils arise from their conduct, the manufacturers endeavour to shake them off as soon as possible, and to enter into a specific agreement with each cultivator. The principal defect in this contract is, that a constant superintendence on the part of the manufacturer is necessary, and this gives rise to endless disputes and complaints, especially where the lands are so much scattered, that the greater part of the superintendence must be entrusted to persons of a description, in whom very little reliance can be placed. In fact the most violent complaints exist on all sides, and both farmers and landholders are very unwilling that the manufacture should be extended, or even continued. Before I enter into any discussion on the causes of this dissatisfaction, it is necessary to premise, that were credit due to the universal clamour in this district, its inhabitants would be unfit for society. According to the querulous assertions of the people every officer of justice and police is venal; every landholder, or indeed person in power, is a rapacious oppressor; every trader is a cheat; every one is a liar; the greater part are thieves; and many are robbers and murderers. At first the assertions, which I heard, were so confidently advanced, and from quarters so apparently disinterested, that I was inclined to believe a considerable part of what was asserted respecting the character of individuals; but I soon found, that the accusations were so universal, that society could not exist among such scoundrels as the people represented each other. I therefore consider by far the greater part of such assertions to be unfounded ebullitions of

no import, and intended merely as an excuse for the necessitous state, into which imprudent indulgence has placed the greater part of the inhabitants.

The reason assigned by different classes of people, for the dislike of the farmers and landholders to the indigo manufacture are so contradictory, that a judicial investigation would be required to ascertain their truth. I shall therefore simply mention them. The reasons assigned by the farmers are—

First, After they have taken advances from a manufacturer, he considers them as his slaves, beats and confines them whenever he is dissatisfied, and always refuses to allow them to pay their balances, and to relinquish the cultivation.

Secondly, That they are cheated both in the measure of their land, and in the measure of the weed. This does not imply, that the manufacture is considered by the natives as a cheat; the fault even by them, is usually attributed to his servants.

Thirdly, That the whole produce of the field does not exceed the rent, which the landlords heighten so as to render the cultivation ruinous; and as most of the land cultivated for indigo was out of lease, the owners may no doubt demand whatever rent they please. The reasons assigned by the landholders or Zemindars are—

Fourthly, That several of the manufacturers are so insolent and violent, that no person of any sort of rank can live near thém with comfort.

Fifthly, That the manufacturers intermeddle between them and their tenantry, so that it is impossible to collect the rent, especially from the farmers who except of advances for indigo, who are encouraged and supported in refusing payment. The reasons assigned by the planters are as follows—

Sixthly, The Zemindars are unwilling that Europeans should settle near them, for the lower natives look on every European as belonging to the governing caste, and thereby the consequence of the landlord is diminished in the eyes of the neighbourhood.

Seventhly, That the landlords are afraid to make any of their usual illegal extortions in the vicinity of an European, least the people, especially the farmers who raise indigo, should be able to lay their complaints before the judge.

Eighthly, That the farmers are deterred from the cultivation by the threats of the landlords, and the increase of rent.

That the behaviour of the Europeans in general is so improper as to be the real cause of the unwillingness in the farmer, I think is highly improbable; but that occasional instances of blameable conduct towards the farmers have happened, there is little doubt; and so long as private Europeans are not perfectly subject like other people, to the courts of law established in their neighbourhood, it is impossible alto-

gether to prevent this inconvenience. It is indeed very much to the credit of the manufacturers, that under such circumstances their general behaviour must be allowed to have been correct. The only remedy that can with propriety be employed, is to prevent in future, every one from settling in the country parts of Bengal, who is not subject to the same laws and jurisdiction with the natives; and British subjects probably should never be put on that footing. Gentlemen who have already engaged in trade or manufactures, must of course remain until they choose to retire; but unless a colony is meant to be formed, infinite advantage would arise from altogether refusing new licenses, and restricting Europeans, who are not responsible to the Company for their conduct, to a residence in the principal towns and sea-ports. The manufacture might be carried on to a sufficient extent by native Portuguese, Armenians, or other persons, who are in every respect amenable to the common law of the country.

The cause of dissatisfaction that seems best founded, is the difference between the manufacturers and the landholders; for there is little doubt, that it is the influence of the latter chiefly, and the idle stories propagated by them, that have rendered the farmers discontented. Whether or not the manufacturers have protected the farmers from oppression, or whether they have been induced by false representations, to support those who were unwilling to pay the just demands of the landlord, it is evident must be beyond my power to determine; but so far as I can judge, this is the chief point at issue. I am inclined, perhaps from national prejudice, to assign the former cause; yet even in this case it must be confessed, that the manufacturer is interfering in a dispute with which he has no concern. The sugar manufacturers, who aid the landholders in collecting their revenue, meet in return with every assistance, and among the natives I heard no complaint against this class of men.

CHAPTER IX.

COMMERCE. EXPORTS AND IMPORTS.

As there is no public account of the goods exported and imported from this district, the amount which I can state, is merely conjectural. In the Appendix will be found the result of my inquiries on this subject; but it must be observed, that some articles are not included. Of these the most important are; First, Cattle, of which an account has been already given under the head of agriculture. Secondly, Foreign goods and articles of luxury, that are imported by different persons for their own use; and finally numerous articles, which are sold at fairs, especially that of Nekmurdun; for most of the dealers who meet at that mart are strangers, and the goods pass from one hand to another, so as merely to have a transit through this district.

With regard to the quantity allotted to each division, I have considered only the situation of the marts, where the goods are landed or shipped, and not the places where they have been produced or consumed; except in the great manufactures of cloth, sugar and indigo, the produce of which may be considered as exported from the work-shops or factories. The rice, and its preparation Chira, are sent chiefly to Moorshedabad, Calcutta, and the intermediate towns. A small portion also is sent to Bhagulpoor. Along with the rice, I might to both exports and imports have added a small quantity of pulse; but this branch of commerce is very inconsiderable and fluctuating. The quantity produced is very nearly equal to the consumption, and the export and import usually arises from some seasons being favourable, or the contrary, to certain kinds of pulse more than to others. When any kind has thriven remarkably, a part is exported, and a little is imported of any kind, the crop of which has been scanty. The mustard-seed is imported from Rongpoor, the oil is sent to Moorshedabad and Narayangunj near Dhaka. The Ghi imported is the produce of herds of cattle belonging to this district, which in the dry season are sent to Morung, and

bring back the produce of their milk in Ghi. The exports are made to Moorshedabad.

Most of the betle-nut comes from the neighbourhood of Dhaka, and is of the kind called dry; but a large proportion also comes from the Rongpoor district, and is of the kind called wet, the husk remaining on the nut in a humid putrescent state. The cocoa-nut comes from Dhaka and Nodiya. Tobacco is not raised in a quantity sufficient to supply the demand of the country; yet a little is exported. The reason of this is, that the commodity is very cheap in the northern parts of Rongpoor, and comes to this district in such quantities as to admit of exportation. Some is sent to Calcutta, and Moorshedabad; but the greater part goes to Narayangunj. The Gangja goes mostly to Calcutta, I believe, for exportation. The ginger and other seasonings are sent to Moorshedabad and Calcutta. These seasonings, which are sold by people called Jhalwalehs, and which are exported, are turmeric, capsicum, onions, and garlic. The first is the only one of consequence.

The goods sold by Posaris or druggists, that are objects of exportation and importation, are as follows—1. Black pepper. 2. Spices. 3. Sandal wood. 4. Paints.—(from Calcutta.) 5. Lac, from Apasan, which comes chiefly by the way of Kumarkhali. Except a little, that is imported for the use of shoe-makers, almost the whole is used by the dyers of Maldeh, who, after they have extracted the dye, sell the remainder at Moorshedabad, from whence a part is again sent into the district, to supply those who make bracelets, and sealing-wax. 6. Mojista from Bootan is imported by the merchants of Dinajpoor and Raygunj, in a greater quantity than supplies the dyers of Maldeh, and part is sent to Moorshedabad. 7. Lodh and a few other dyeing drugs are brought from Rajmohol, and other neighbouring countries; but among these the only one of the least importance is the coarse Rongpoor indigo, used at Maldeh.

The black pepper and lac are the two most important articles. The wax imported is from Morung. That exported from Hemtabad and Dinajpoor goes to Calcutta, that from Maldeh is chiefly, I believe, used at the Company's factory on the opposite side of the river. Most of the Bengal salt that is used in this district, comes from Narayangunj near

Dhaka, which is the chief mart for the Chittagong and Bulluya salt. The coast salt comes from Calcutta. Both are always very much adulterated by the petty traders, before they are retailed; insomuch, indeed, that the retail price is often lower than that which is here stated.

All the metals except the iron are imported from Calcutta. The iron comes from Birbhum, by the way of Moorshedabad. The brass vessels are chiefly made at Kangtoya (Cutwa R), a town between Moorshedabad and Calcutta, that is very famous for this manufacture. The Dosta, or metal which I have called Zinc, seems to be a kind of pewter, or alloy, that contains a very large proportion of the zinc. The goods sold by Monibaris are beads, coral, mock-coral, rubies, and pearls; European cutlery, looking-glasses, chiefly made at Moorshedabad, brass and wooden cups, silk strings, and wooden combs. They are imported from Calcutta and Moorshedabad. The shells or Changk, I believe, are the produce of the Maldive islands, and are imported from Calcutta by the way of Kumarkhali. The stone plates and cups are imported from the west of India, by the way of Moorshedabad. Sal and Sisu timbers are brought down the rivers from Morung, and from the low lands subject to Bhotan. I have not included in the estimate those which merely float through the district. A little fire-wood is exported from Maldeh and Ghoraghat by the Company, in whose accounts the exact amount will be seen; I have not, therefore, included it in the estimate. The bamboos and bamboo mats are chiefly exported in the boats that carry away rice and sugar, and are employed to keep the goods from injury by leaking and rain. The sackcloth, also, is chiefly used for the package of these articles of commerce, and of piece-goods; and a good deal is imported from the northern parts of Rongpoor, where it is very cheap. The Pat is exported chiefly by the boatmen, who come for the above-mentioned goods, and is used in their vessels for cordage. The Son is mostly exported by the company. Cotton wool of a coarse quality, from the western parts of India, is imported into almost every division of the district, especially towards the north and west. All this comes by the way of Moorshedabad, or of its port, Bhogowangola. A little of the fine cotton, which grows in the south-east part of this district, is sent into Mator, and about

an equal value comes from English Bazar to Maldeh. The raw silk, which I have mentioned as exported, is entirely the produce of the south-east parts of the district, and is sold at Rongpoor and Selvorish, chiefly to the Company's factories. I have made no allowance in the tables for the silk produced on the banks of the Mohanonda, as the two sides of the river are so intimately blended in commercial concerns, that a great part of the silk passes more than once from one district to the other before it is finally fitted for sale; and, so far as I could learn, the left bank produces nearly about as much as is woven in this district. The Chintz is brought from Patna; the shawls are brought from Moorshedabad; the English woollen cloths from Calcutta; the carpets are brought from Patna. The Gur or extract of sugar-cane, the Sugar, Molasses, and Treacle are sent mostly to Moorshedabad; a little is also sent to Narayangunj. These three last are mostly exported by the manufacturers. The Indigo is sent entirely to Calcutta by the manufacturers. From hence it will appear, that the chief intercourse which this district has in commerce is, with Calcutta, with Moorshedabad, or its port, Bhogowangola, with Narayangunj, which in some measure is the port of Dhaka, with Kushti, which is the port of Kumarkhali, and with Patna.

Persons by whom Trade or Commerce is conducted.— Although some native houses deal in this district to perhaps a greater extent, the Honourable Company, in every view, must be considered as infinitely the most conspicuous among the merchants. Every native is desirous of dealing with the Company to the utmost extent possible, while it is notorious that the goods procured by the Company are both better and cheaper than what individuals can obtain. These circumstances are, no doubt, owing to the fair manner in which the purchases have been conducted.

Merchants, that is to say, persons who export and import goods which they buy and sell without taking any share in their preparation, are by the natives divided into two kinds, Sayodagur and Mohajon, which differ merely in the extent of their dealings, the Sayodagur having a very large capital, and possessing many vessels, while the Mahajon's capital is moderate, and he in general hires the vessels, on which he loads his goods. Sayodagur is said to be a Persian word,

and Mohajon is said to be Sanskrita, and both are said to be, in fact, synonymous, although the above distinction has been now adopted. Both words seem to have been introduced from the western parts of India, and probably by the Muhammedans; for, in the time of Bollalsen, these persons had not obtained a station of importance sufficient to procure a rank or cast appropriate to themselves.

Among the natives, in fact, there is now no person, who resides in the district, that is considered as a Sayodagur. One family, indeed, has acquired immense wealth in that line; and for nine generations the forefathers of Baidyonath Mondol carried on an extensive commerce with great reputation and propriety. The present head of the family has given up trade, has made large purchases of land, is just as much despised as his forefathers were respected; and the different branches of the family, having no occupation for which they are qualified, have fallen into the most violent disputes. The greatest houses who trade with this district are Bhoj Raj, of Bhojpoor, near Patna, and Thakurdas Nondi, of Kalna, near Calcutta, who, with several others, send here for large cargoes of rice for the Calcutta and Moorshedabad markets, and have agents that reside constantly on the spot. The European manufacturers of Indigo by the natives are generally complimented with the title of Sayodagur, and one or two of them deal so largely as to be entitled to the appellation. Some of them are so ignorant as to consider the appellation as an affront, and their servants call them Bora Saheb, or Great lord.

Many smaller merchants (Mohajons), who have capitals of from 2000 to 25,000 rs., reside in the district, and trade to the same places. They export rice, sugar, molasses, extract of sugar-cane, oil, and tobacco; and import salt, cotton, the metals, and spices. Persons of the same description from Narayangunj bring salt, cocoa-nuts, and betle-nut, and take away sugar, extract of sugar-cane, and tobacco. Another class of small merchants, who mostly profess themselves to be persons that have dedicated themselves entirely to religion, and who are called Gossaing, or Goswamis, purchase large quantities of silk and cotton cloths, and import Chintz, carpets, and Patna blankets. Some small merchants from Patna and Bhagulpoor bring the same articles, and Catechu a few

drugs, and stone cups and plates. These take away some rice and silk cloth.

The cloth merchants of Santipoor and Moorshedabad send agents, who purchase cloths, especially such pieces as have been rejected by the Company. A house from Kumarkhali supplies shells, and the lac used at Maldeh comes from the same place. The manufacturers of sugar, who also export a great part of it, are considered as Mohajons. The bankers, of whom mention will hereafter be made, import European woollens, pepper, spices, cotton, shawls, metals, and hardware, and export ginger and turmeric. These confine their speculations entirely to the vicinity of the capital, and are not classed among Mohajons.

I shall now consider the persons with whom the agents (Gomastas) of the great merchants, or the smaller merchants deal.

In the first place, in large towns, there is a class of men called Amda Walehs, who purchase the investments brought in a boat by wholesale, and sell the articles in small lots to the different tradesmen, or petty dealers, as these require them. In this district salt is the principal article of importation sold in this manner, and the number of such persons is very small. The name is Persian, and, until the arrival of the Muhammedans, there were probably no such persons in Bengal. The merchants, therefore, dispose of the greater part of the imports, in small lots, either to the different manufacturers, who require them as raw materials, or to shopkeepers (Dokani or Dokandar), or finally to a class of petty dealers, who are called Paikars. I have already given an account of the tradesmen, manufacturers, or artificers, and shall now, therefore, proceed to the other two classes.

Dokan, a shop; and Dokandar, a shop-keeper, are Persian words, and, until the arrival of the Muhammedans, there were probably no such things in Bengal, unless we choose to call by this name the part of an open market, where a vender sits surrounded by his goods, and exposes them for sale. This, I imagine, is the original native manner of disposing of all goods in Bengal, and in this district the number of shops continues wonderfully small. I shall give a list of the different kinds that I observed:—1. Many of the Amdawalehs abovementioned have shops contiguous to their warehouse,

where they retail the same articles that are sold by the next class, and have capitals of about 500 rs. 2. Mudis, who retail rice, pulse, salt, oil, sugar, extract of sugar-cane, prepared rice (Muri, Chira, Murki); boiled butter (Ghiu); seasoning, tobacco, betle-nut, and, in fact, all sorts of provisions. Their capitals are about 40 rs. 3. Chaulerphorya, a retailer of rice, who sells nothing else, and requires a capital of about 20 rs. 4. Loboner Phoryas, who retail only salt, and have capitals of about 10 rs. 5. Posari, or druggists, called also Gondho Boniks, retail spices, sandal-wood, dyes, paints, medicines, seasonings such as pepper, dry ginger, and carminitive seeds, betle-nut, sugar, paper, and ink. They require capitals of about 100 rs. 6. Jhal walehs, retail raw ginger, turmeric, onions, garlic, and capsicum, and have capitals of 2 or 3 rs. 7. Gurwaleh, who retail only extract of sugar-cane. Their capitals are about 10 or 12 rs. 8. Pansupari-walehs, who retail betle-leaf and nut. Their capitals may be 3 or 4 rs. 9. Gangja walehs, who retail the prepared buds of hemp, which are used for intoxication, and require 50 or 60 rs. as capital. 10. Kosayi or butchers. These are confined to 4 or 5 shops in Dinajpoor, and sell chiefly goats' meat. Their capital may be about 10 rs. 11. Katra, shopkeepers, who purchase wooden furniture, such as chests and stools, from the carpenters, and expose them for sale. They have capitals of about 25 rs. 12. Bason waleh, who retail brass vessels, and have capitals from 200 to 1000 rs. 13. Monihari. In treating of the exports and imports, I have already given an account of the articles which these persons retail. They have capitals of from 10 to 50 rs. 14. Sangkha walehs, who retail shells and bracelets, and have capitals of from 100 to 2000 rs. 15. Tula waleh, who retail cotton wool. They have capitals of from 20 to 100 rs. 16. Sutli and Choti walehs, who retail the twine and sackcloth that is made of the *Corchorus capsularis*, or Pat. They have capitals of from 5 to 50 rs. 17. Kaporya, or retailers of cloth, who have capitals of from 50 to 1000 rs. Besides these shopkeepers, various artists, which I have already mentioned, retail in shops the produce of their labours. These are called by the general name of Bebosadar. For the sake of method, I shall here recapitulate their names, and refer to the head of trades, where a fuller account of them will be found.

18. Lahari Luri. 19. Sangkhari. 20. Chamar. 21. Tamaku Waleh. 22. Modwaleh. 23. Goyala. 24. Moyra. 25. Haluyikor. 26. Morobba Waleh. 27. Puya and Phulari. 28. Bhujari. 29. Dail Hari. 30. Kungdkor. 31. Kumar. 32. Stonecutter. 33. Kangsari. 34. Bidri Waleh.

The whole number of fixed shops in the district does not amount to 2000; but at open markets (Hats) numerous petty traders expose for sale the same, and a few other articles. The employment of all these shopkeepers, it is evident, is much more the sale of the produce and manufactures of the district than of goods imported, the amount of which is very small.

The business of the Paikars remains to be discussed. They are men who possess small capitals of from 100 to 500 rupees, and generally have a small warehouse, where they deposit their purchases, until they can again dispose of them. Their whole occupation is to buy and sell, and they deal in almost every thing, but do not retail. It is through their means, in a great measure, that the capital traders both dispose of their investments, and procure new ones. They more especially, however, deal in grain, cloth, cotton, silk, and salt. The Paikars take a small quantity of goods at a time, and go to all the neighbouring markets, where they make their sales, and purchase the articles which they know the great dealers will take off their hands. It is through them chiefly that the great dealers make advances for cloth, or grain, because the Paikars are acquainted with the characters of the individuals for whom they become security. They have from 5 to 6¼ per cent. commission including the premium for security.

The greater part of the investment of rice, which is the principal commerce of the district, is, however, laid in by persons who are called Beparis, and who, in fact, are chiefly the farmers that occupy lands where the soil is stiff clay. These deal in cattle, poultry, and grain, and not only bring the produce of their own farms for sale, but in the dry season, when the labour of their fields is at a stop, they make large purchases from the farmers who occupy loose soils, and carry the grain to whatever warehouse (Gola) gives the best price. The rich farmers make large advances, and can afford to keep the grain for a favourable market. The poor chiefly assist

the rich in carrying their grain to market, and receive daily wages for themselves and cattle. The advances are usually made between the middle of June and the middle of November. The bargain must be confirmed by the landlord, in order to procure his consent to wave his right of hypothec, and the money is, in fact, generally paid to him for rent. The usual interest is $\frac{1}{2}$ ana or $\frac{1}{32}$ part a month until the delivery of the grain, and this is received at what is called the market-price, with an addition of $\frac{1}{20}$ part for profit to the person who advances the money.

An inferior kind of Beparis are called Phiri walehs, and may be compared to pedlars. They go from house to house to make their sales and purchases, and seldom possess cattle as a conveyance.

A class of men called Dalal are common in many districts, but here they are confined to Raygury, to Maldeh, and to the Company's factories. They are brokers, who are employed to find out goods for those that wish to purchase, and receive a small commission.

In the time of Bollalsen bankers or dealers in money were called Sonar bonik, and were probably of little consequence, as their rank is very low; but on the Muhammedan conquest commerce seems to have increased, and to facilitate its operations bankers were introduced from the west of India. These bankers are divided into two kinds, kuthi walehs or proper bankers, and Potdars, or money changers. Both are commonly called Saraf, which is a Persian word.

The proper bankers in this district are confined entirely to the capital, where there are seven houses. The principals live generally at Moorshedabad, but some of them occasionally visit Dinajpoor, and are all of the Oshoyal sect. I have already mentioned that some of them import certain goods, and they export dry ginger; but their principal business is granting bills of exchange for money. In the Muhammedan government the revenue was remitted to Moorshedabad through these bankers. This branch of profit they have now lost, and are chiefly employed by the landlords in keeping their rents, in paying their revenue, and in remitting the surplus to such as reside at a distance, which is the case with the greater part. The money also which is necessary for

purchasing the exports is chiefly sent to the district through these houses.

Bills are never discounted by these bankers, except by the house of Jogotseit, and even by that very rarely; but they occasionally lend money in advance to landholders who are in arrear of revenue. They take one rupee per cent. a month as legal interest, but exact as much more under the name of Munafa, which is deducted from the principal at the time when it is advanced. Bills of a short date granted by bankers on Moorshedabad, for cash paid at Dinajpoor, besides the stamp, cost from one-half to one per cent., and bills on Calcutta from 1 to $1\frac{1}{2}$ per cent. The capital of several of these houses is supposed to be very great, and their credit is considered as indubitable.

The Potdars or money changers are a very numerous class, and many of them have no shop but attend at markets, and sit with their cowries placed in heaps before them. Except, indeed, at Dinajpoor, and a few other places, this is the universal practice. Their principal business is to exchange cowries and silver. Except in towns it would be very difficult to obtain silver for gold, and could only be procured through the favour of private persons, none of the common money changers having a capital of 16 rupees. Even in Dinajpoor silver for 100 rs. worth of gold can only be procured from a principal bank or Kuthi. A potdar goes in the morning to a market-place with a bag of cowries on his head, or, if a very rich man, with a loaded ox, which, if good, may carry to the value of 15 rupees. All the early part of the market he sells cowries for silver to the people who wish to purchase goods, and in the evening the various hucksters bring their cowries, and exchange them for silver. In the morning the potdar usually gives 5760 cowries, or 72 pon, for a rupee, and in the evening he gives a rupee for 5920 cowries or 74 pon, which is a profit of 2 pon, or $\frac{1}{36}$ part, on every rupee that they exchange. This is on the supposition that the rupee is a new kuldar, such as is now struck at the mint in Calcutta. All old rupees, and every kind of rupee but the kuldar, pay various rates of exchange (Batta), according to the will of the money changers, who, it is supposed, always gain more by every kind of money than by the kuldar. As

kuldars are the only legal proffer of payment their use has become very general, notwithstanding the efforts of the bankers and money changers to the contrary, and the money changers would therefore have suffered a loss had they not fallen on a plan of marking the kuldars with a stamp, under pretext of ascertaining whether they are true or false, after which the rupee is not exchangeable without paying an additional Batta that seems to be entirely arbitrary, and it becomes, of course, a circulating medium as valuable to the money changer as if it were foreign coin. In order to render this more agreeable to the people, they pretend that the marks will enable those who have received the rupees to have them changed, should any other dealer refuse them as bad. The loss that is sustained by the public is very considerable, especially by the poor, who are so necessitous that they submit to take any rupee, either in loan or payment, rather than suffer delay, and they always must pay the full batta or loss on exchange. If, therefore, a banker chooses to put a mark on the money, he should ever afterwards be compelled to change it at full value, and the use of false stamps should be considered as equally criminal with coining false money. In Dinajpoor, where the money changers have capitals of perhaps 100 rs., it is usual for them to advance cowries to all servants who have monthly wages; and at the end of the month, when the servants' wages are due, he repays them in silver, for almost every man, if possible, anticipates his income. The money changer gives these improvident persons 70 pon of cowries for the rupee, so that he has $\frac{4}{74}$ a month for his money; but he very often loses the principal.

Of the places where trade is carried on.—The original manner in which all commerce seems to have been carried on in Bengal, and perhaps in every part of India, and which in this district is still by far the most common, is at markets called here Hats, where once or twice a week all those from the neighbourhood who wish to buy or sell, assemble and dispose of their commodities by retail. The farmer brings the produce of his lands, the artist that of his workshop, and the fisherman that of his snares. Numerous small traders, among whom may be included all the shopkeepers, also attend to buy up goods for exportation, to sell those which have been imported, or to act as intermediate agents

between the producer and consumer, especially in the sale of betle-leaf and fish. For this purpose is reserved a space of ground, divided by narrow paths into plots like the parterres of an old garden, and each plot is occupied by two or three venders, while the buyers walk about in the paths. In general the whole is conducted in the open air. In some places, however, sheds have been erected by the zemindars for the accommodation of dealers, and are rented out to the principal persons that attend. In Dinajpoor, under the eye of the magistrate, this has been found to be a great convenience; but many persons alleged to me that in remote parts the proprietors made these sheds a pretext for levying a certain sum from every vender, whether they used the sheds or not.

Duties were formerly levied at each Hat by the proprietor of the land, who was thus interested to preserve peace and justice, that his Hat might be fully attended; but there is great reason to believe that in general the proprietors and their agents studied more their immediate gain than any regular profit, and were often so rapacious that the market was deserted. The utmost advantage has therefore arisen from the removal of this tax, which was done by Lord Cornwallis soon after his first arrival in Bengal. The Hats are now free, and are placed under the immediate protection of the Darogah of the division in which they are held. It must, however, be confessed that some inconvenience attends this plan. The Hats are so numerous that even the principal ones cannot possibly be attended by the Darogah, nor even by the Mohurer or Jumadar, the only person of the least respectability that he can detach. It may, therefore, be said that there is no legal adequate superintendence, either to settle disputes, or to prevent fraudulent measures and weights, and violent complaints exist concerning exactions made both by the landholders, and by the native officers of police.

On the festivals of Hindu gods, and of persons reputed saints by the Moslems, large assemblies of people (Mela) take place, and traders embrace this opportunity of disposing of their goods, and of supplying the wants of the assembled multitude. In this district there are annually several such assemblies, which both in their origin and nature very much resemble the fairs of Europe. This is an original Hindu

custom, although, as might be expected from the Muhammedan predominance, the most distinguished meeting is that held at Bhowanipoor, in the Ranisongkol division, in celebration of Nekmurdun, a Moslem Pir or saint. In my account of that division I have already mentioned the nature of the assembly. All the other places in this district, where sales are made, have names introduced by the Muhammedans, owing either to these conquerors having changed the names, or to there having been no such places, until they came.

A bazaar ought to imply a place where things in common use are regularly sold; but in this district there is no such place of any consequence, except in Dinajpoor, where there are two or three streets of shops, and at Ghoraghat where there is one. At several villages there are two or three shops where provisions are sold, and these with some propriety may be called bazaars, although this name is not given to them; and is usually applied to places where every evening there is a meeting of people in the open air to buy and sell fish, vegetables, and other such necessaries; and where there are no houses near, as is often the case, this meeting is called a Tahabazari hat.

Gunj and Bundur are indiscriminately applied to every place, from whence goods are exported and imported by wholesale dealers. Several such places have not a single shop and do not afford to the traveller any means of purchasing the most common necessary of life, and merely contain a few warehouses (Golas), where the goods can be deposited, together with the houses of the agents, by whom they are bought and sold by wholesale. The name, it must be observed, is often very much misapplied, and many places are now called Gunj or Bundur, where no merchant resides. The name is naturally enough continued, even after the place has lost its importance; and it seems frequently to have been employed in anticipation of hopes of greatness, which were never realized. Nogor is said to be the proper Hindu name for a mart; but this is liable to some doubt, and in this district at any rate, has gone entirely into disuse in that meaning.

Weights, Measures and Coins.—In the account which I have given of money-changers, I have anticipated much of what I had to offer on the subject of coins. The usual currency consists of silver and cowries; gold seldom appears, and

copper has never been introduced. Some years ago gold was abundant, but has since become very scarce. This is a fortunate circumstance for the poor, and a loss to the bankers, who had an immense profit on the gold. The most common silver currency is the Kuldar, or the new milled coinage of Calcutta, of which however a considerable proportion has been depreciated by marks. There are however, still current a good many of the old unmilled coinage, and of French rupees, which pay a heavy exchange. Most transactions, however, are settled by cowries, which for some years have been very cheap. I have already mentioned the rate of exchange, that has of late been usual.

There is no uniformity in the weights and measures of any kind, and there is every reason to think, that the most gross frauds are very frequently practised. The weights not only vary in almost every market, and are different in the same market for different kinds of goods; but the same species, rice for instance, is sometimes sold by one weight, and bought by another; and what is still more injurious, there is no stamp on the weights, which are in general bits of stone, and admit of the most gross deception. All these services render it impossible for the officers of police to detect false weights. The various sers in use are of 100 s. w., 96 s. w., $82\frac{10}{18}$ s. w., 80 s. w., 76 s. w., 60 s. w., and 58 s. w. Should it not be judged advisable to introduce one general standard, all dealers might be compelled to use weights formed of brass, with strong distinguishing marks for each denomination, so that the common people might at once distinguish them; this, no doubt, would be a great step towards preventing fraud; but still the scales that are used in weighing are so rudely formed, that a dexterous man can readily impose on the unwary. The scales are never suspended from any fixture, and being held in the hand, and being very loose and imperfect, a little twist prevents their free motion. Owing also to their being held in the hand, no scales of a considerable size can be used, so that the delivery of a large quantity of grain occupies a most intolerable length of time.

Whatever may be the weight of the ser, it is divided into 16 Chhotaks, and 5 sers form 1 Posuri, and 8 Posuris 1 *man*. There is no higher denomination of weight, nor indeed in general is there any scale than can weigh more than 1 Posuri

at one time. The only exception is, that the sugar manufacturers have large scales suspended from a beam, and can weigh at once 1 or 2 *mans* of extract or molasses; but even this is attended with vast trouble. A pot, like that containing the commodity, is placed in the opposite scale, and filled with sand, until the balance is equal. The sand is then weighed with the common small scale.

The grain measures are still a great deal more defective than the weights. The most ignorant and low people of the district make them of basket-work, in form of an hemisphere, and they are supposed, when heaped, to contain a certain weight of rice in the husk. From hence we may judge of their imperfections. In the first place, the workmen have neither means nor skill to make them of an uniform size, and judge in general merely by the eye. Secondly, Even, if the workmen could make a basket, that, when heaped, would hold a certain weight of rice, this would be a standard liable to great variation, as will be seen by looking at the table, which I have made of the different weights of that kind of grain. Thirdly, A basket approaching to a hemispherical form, by such enlargements or contractions of the mouth, as even from accident are altogether unavoidable, will, when heaped, contain very different quantities of the same grain. Fourthly, The same basket when heaped with rough rice, will contain more cubical inches of that grain, than it will of clean rice, pulse, or mustard-seed, as the rounder and smoother the grain is, the less can be heaped on a given space. Finally, all the imperfections of the weights are accumulated on the measures formed from them as a standard. The uncertainty attending all these circumstances would frustrate all attempts to prove intentional fraud, and the people may in fact be said to have no use of grain measures, although the farmers nominally sell their whole produce by this denomination; but, in delivering and receiving the grain, each party measures by his own basket, and then they come to an agreement about the quantity. In small purchases persons generally judge by the eye.

The integer measure is called a Don or Katha, and is divided into halves and quarters, which are always taken by guess; 20 Dons form a Vis, 4 Vis 1 Dam, and 4 Dams 1 Pauti; but the Don is the only measure actually used. This

varies in different places from 2 to 5 sers of all the various kinds, that I have mentioned.

Liquids are always sold by the ser or *man*, that is by measures supposed to contain such weights. These are not so bad as the grain measures, because they cannot be heaped; but are liable to all the variations in the weights, that served as standards by which they were made.

In order to prevent imposition, both grain and liquid measures should be made of metal or wood, and stamped by the magistrate; and those for grain should be made very narrow, to render the heaping less precarious; for I suspect, that for some time at least, it would be found a very difficult task to induce the natives to purchase by streaked measures. The joint of a bamboo, examined and sealed by the officer of police, answers very well for liquids; and might also answer for grain, were it streaked; but, when heaped, the various proportions between the diameter and length would affect the contents. Metal or wooden grain measures are therefore necessary.

It is probable, that much good might be done by establishing, at every considerable market place, a police officer provided with proper standards for all the kinds of weights and measures that the custom of the market requires, and with an apparatus for measuring and weighing considerable quantities of goods at one time. Should it not be found proper to attempt the introduction of regular weights and measures, this would also serve as a great check to imposition, as there would be on the spot means for ascertaining, whether or not the weights and measures used by dealers were fair. The expense might be paid by small fees. I have already mentioned the want of public land measurers, which office might be connected with the one above mentioned, as the markets are held only once or twice a week. The present plan of sending a surveyor from the capital, in case of disputes, is totally inapplicable to common practice, such as measuring a field or farm; for the expense far exceeds any advantage, that the party who pays, can derive from the measurement.

The land measure in use here is the bigah divided into 20 Kothas, and seems from the name to have been introduced

by the Muhammedans; but the Hindus of this district had a measure called Kura, which has now gone into disuse. Regular standards of the measure customary in each Pergunah are kept in the collector's office, and furnished to all who are interested, at a moderate rate. The standard, however, is only the yard (Guz) or cubit (Hat), and the rope, that is used for surveying, is measured with this standard. The rope is made of very loose twine, and, being measured when dry, shortens very much when wet in the field, by which means a great imposition is suffered; then the two people, who carry it, usually tie the ends to their girdles, or sometimes round their wastes, or sometimes to their shoulder, and, when they measure, allow the rope to hang down, so as only to touch the ground in the middle. The loss thus sustained is very indefinite, and is called Guljinda. Whether or not the Zemindars and their agents are aware, that the extents of different bigahs are in the proportion of the squares of the whole length of the ropes employed, I cannot say; but the people in general have no adequate notion of this, and seem to consider the loss by Guljinda merely as in the rate of the square of the length taken from the rope. To judge from what the agents say, they are of the same opinion, and may therefore be ignorant of the injustice they commit in taking the Guljinda. In the account of the customary bigahs of each pergunah I have deducted, what is said to be the usual Guljinda, and have calculated the number of square feet accordingly, as will be found in the table of pergunahs or estates.

The natives of this district have scarcely any manner of measuring time. I heard of neither the sand glass nor clypsedra, except one belonging to the judge. The art of dialing was, and is totally unknown to the natives, and scarcely any have procured watches. The day and night is divided by them into 8 Pohors, and 60 Dondos, and their almanack states in a general manner the number of Dondos contained in the days of each month, but descends no farther into particulars, which indeed would be useless, where the only means for measuring time is conjecture.

Conveyance of Goods.—In the topographical account of this district I have already explained, that it is everywhere intersected by rivers, which in the rainy season, and when

travelling by land is nearly suspended, admit of large boats to every division, and of small ones to most villages. In the dry season the navigation is confined within very narrow limits, and the country, being everywhere dry, plain, and open, almost every part is accessible for loaded cattle, and few or no roads exist, at least for the conveyance of goods. The manner, in which these are transported, is of course adapted to such circumstances. Very little is exported or imported in the dry season, during which the produce of the country is collected in warehouses, that are situated on the banks of rivers; and, when these swell, is loaded on boats, and sent to the places of its destination. The imports are made in the rainy season, and during the dry weather are distributed from the marts to the various market places. This is attended with so much inconvenience, from the slow returns of capital, that the smaller traders, who deal chiefly in the articles of import, use canoes and floats (Mars), which consist of two or three canoes connected by a platform of bamboos. Even in the dry season these can penetrate a considerable way, into the country, from the Mohanonda, Atreyi, and Korotoya, which at all seasons are navigable into this district for boats of 500 *mans* burthen. For rice, the great article of export, this would be too expensive a mode of conveyance, and indeed of little consequence; as the merchants would in general avoid taking it to the Calcutta or Moorshedabad market, until the rice produced in the vicinity of these cities is consumed, which is not until after the commencement of the rainy season; and, besides, the Bhagirathi, which is the channel of conveyance between this and Moorshedabad and Calcutta, is not navigable in the dry season. At that period the supply of goods, such as cotton, salt, betle nut, shells, and other articles of consumption, can only be procured from Bhogowangola, Kumarkhali, or Narayangunj, which of course become the marts for these articles.

Very few of the boats employed in trade belong to this district; because, during the dry season, they could have no employment, except at a great distance from the inspection of the owner. Some merchants, however, keep a few large boats, which lie idle all the dry season, but are loaded, and ready to depart, so soon as the season admits. These in general can annually take two loads of rice to Calcutta, and

bring back two loads of salt; but the practice does not seem judicious. The hulls of the boats employed are almost all of the same construction. When open above they are called Dinggis; when they have a thatched roof in the after part only, which is usually the case when their burthen is under 200 *mans* of rice, they are called Pansi; when thatched from nearly one end to the other, and when under 700 *mans* burthen, they are called Ulaks. Boats from 700 to 5000 *mans* burthen, the largest used in this district, over the thatch have a platform of bamboos, on which the people can walk to pole the vessel along, or to manage the sail; a vessel of this kind is called a Chhapor Beri.

The burthen of the boat is calculated by the quantity of rice which she could carry; and not by the quantity of any other kind of goods with which she may be actually laden; and in all valuable cargoes the boat takes much less weight than her estimated rate of burthen; because it would not be safe to load her so deep, as is usually done with rice. In the dry season a boat carrying goods from Nalagola, the port of Dinajpoor, to Bhogowangola, the port of Moorshedabad, or to Kushti near Kumarkhali, is allowed from 3½ to 4½ rs. for the 100 *mans* burthen, at 96 s. w. ser, or for about 88 cwt. A large boat from the towns near Dinajpoor on the Punabhoba, such as Dumdumah, or from the marts on the Atreyi, such as Potiram, is paid at the rate of 13 rs. for the 100 *mans*, for carrying rice to Calcutta. From the towns on the Korotoya the freight to Calcutta, in the rainy season, is usually only 10 rs. for the 100 *mans*.

For the purpose of commerce, as I have already said, there are scarcely any roads. Where the soil is light, an empty space is left in the fields, that are cultivated in the dry season; but this is in general too narrow, and too much broken to admit of carts. In the rice grounds there is seldom any trace of a road; because cattle cannot travel when the crops are on the ground, and, when the crops are removed, loaded cattle find a good road in every direction. The little banks by which the water is confined on the rice fields, prevent even then the use of carts, unless accompanied by pioneers to remove these, and to slope the banks of water courses. Great inconvenience arises to commerce from this want of roads, for wherever there are any such, as in the vicinity of the capital,

carts are constantly employed. Roads adequate to admit carts, in the dry season, from the principal Hats to the chief marts, would therefore be of great advantage; and as the idea, in the present state of things, of making them suited for post chaises at all seasons would be absurd, the expense might be extremely moderate, and might be defrayed by a trifling composition for each plough, one-half to be paid by the landlord, and one-half by the tenant, and which of course should be levied on all lands free and assessed. The principal difficulty would be to prevent misapplication or embezzlement; and I confess, that this difficulty appears to me exceedingly great. Considering the duties, that a magistrate has to perform, I look upon any expectation of advantage to be derived from his superintendency as totally chimerical; and little confidence can be placed in that of his native assistants. If the landholders were empowered to act as commissioners for highways, in the present state of their education, and as most of them would act by deputy, I am afraid that each would endeavour to take as much of the money levied as possible, and that the roads would remain much as they are at present. Yet upon the whole it seems to be the plan most likely to succeed, especially if the collector, who is not so much oppressed with business as the magistrate, should be directed to prosecute all neglects of duty in the commissioners.

The usual mode of conveyance for goods by land, is on oxen in back loads, and the common rate for 12 miles carriage may be reckoned $2\frac{1}{2}$ pon of cowries ($\frac{5}{148}$ rs.), for each *man* (96 s. w. the ser) or $98\frac{1}{3}$ lbs.

Porters are seldom employed, and indeed can carry very little. Their load is divided into two equal portions, that are suspended from the two ends of a pole, which they carry on their shoulders. They are said to take about 74 lbs. weight 12 miles a day; but I found it impossible to procure people who would perform any such labour for more than double the usual hire, which is $\frac{4}{74}$ (4 pon of cowries) of a rupee each day. They are seldom employed for carrying goods, and are chiefly hired to carry parcels for travellers.

At the town of Dinajpoor carts may be hired for six anas a day; and for this a cart conveys goods for (six coss) 12 miles. The cart is drawn by two oxen. These are poor

creatures, which is perhaps owing to the rate of hire being fixed on the cart, and not on the weight of the load. Each cart takes from 7 to 10 *mans* (of 96 s. w. the ser), or from 690 lbs. to 985 lbs. This rate is apparently higher than the carriage on back loads; but the cart is always preferred, when it can be procured, and the merchant probably pays less than the rate established for travellers. Except at the capital, neither carts, oxen, nor porters, can be usually procured for hire, no persons making the carriage of goods a profession; and the supply even at the capital is extremely scanty. Many of the Paikars, or petty traders, keep oxen for conveying their goods to and from their warehouses; but the great means of conveyance depends on the cattle of those who cultivate clay lands, and who in this manner find a source of profit, when nothing can be done on their farms. In general, however, they do not work for hire; but purchase the goods at the markets, and carry them to the marts for sale. There is no such thing as a regular carrier.

The roads of communication between the capital of the district, and the Thanas or chief places of the subordinate divisions, are equally neglected with those intended for commerce; and, so far as I could judge, could only be formed and repaired by similar means. It is the landholders, who are chiefly interested in their repair, as their communications with the capital are very numerous.

The general roads of communication, between the capital of this district, and those of the adjacent jurisdictions, are in a tolerable state; and the magistrates, who have formed them, and kept them in repair, seem to be entitled to great praise, especially as one of them, conducting towards Moorshedabad, has been carried, at the expense of this district, through the whole breadth of Rajshahi. No employment can be better for the convicts than making and repairing these roads, and the magistrate has it always in his power to obtain sufficient information concerning their state, to enable him to superintend the conduct of their overseers with proper effect. All that appears to be wanted in this district, with respect to these roads, seems to be some fund for erecting bridges over small water courses, for these roads should be practicable at all seasons. In the present state of things

bridges over large rivers cannot be attempted. A little more attention to ferries is all that would be required.

In the Muhammedan government these roads of communication between stations seem to have been numerous, and well formed; but the roads, which these conquerors made, have become in a great measure useless from the change of stations, and have gone to ruin. It would not appear, that the natives ever had roads for facilitating the exportation and importation of goods. Those laid down in Major Rennell's map are probably such as have been once intended to be made, and have never appeared except on paper.

The ferry boats in every part of Bengal are bad, and generally are so overloaded, that frequent accidents occur. They are also in general totally unfit for the conveyance of cattle. The landholders, so far as I learned, admit, that they are bound to provide ferries; but the obligation, I am informed, in a strict interpretation of their engagements, is very doubtful. It is however so evidently their interest in many cases, that to a certain extent they will usually comply; but they can never be expected to furnish good boats. In general the ferry-man receives a small quantity of land free of rent, and binds himself to find a proper boat, and to transport all persons free of hire: and it is the duty of the Darogah to see, that the boats are proper, and the people attentive. This, I suspect, is a duty, to which very little attention is paid; and indeed its execution would be difficult. Heavy complaints exist on this subject, as on most others. Many of the ferry-men complain, that they are compelled to pay rent for their lands; and others allege, where the ferry is much frequented, that they are compelled to give the landlord a share of the profits, which arise from the usual and voluntary contributions, that are made by passengers. It would probably be found on investigation, that the lands assigned for the support of ferries were not included in the rental, by which the revenue was fixed, and should therefore be considered as exempted from all claims of the landholder; and I am inclined to suspect, that their ready acknowledgement of the obligation to find boats arises from a conciousness of this circumstance. I have no doubt, but that great advantage would accrue from taking these lands into the management of

the police, and granting them, and a right to certain fees from passengers to ferry-men, on condition of their keeping proper boats. A written copy of the agreement should be suspended at each ferry-house, so that any passenger might apply for redress, should any extraordinary demand be made, or should any stipulated condition of attendance, care, or accommodation be neglected, and all interference of the Zemindars, farther than as other passengers, should be most strictly prohibited. The boats most proper to be used, in the rivers of this district, are the mars or floats, consisting of two or more canoes joined by a platform of bamboos. These are capable of conveying cattle or even carts; and, where there are no waves, transport a number of persons with much safety. They are less fit for the large rivers of other districts, that have considerable waves, and that are too deep or wide to admit of the floats being pushed across by poles, or drawn by ropes.

There may be said to be no accommodation for travellers. One landholder, as I have already mentioned, entertains all travellers who choose to apply; and natives in general find people of their own caste, who will give them room in their house to sleep on the ground; and the absolute necessaries may commonly be procured, when there are few persons in company. Unless Europeans are travelling post from station to station, which requires relays of carriages to be placed on purpose, and is attended with an enormous expense, they must travel in tents, and carry with them almost every person or thing, that they require.

END OF DINAJPOOR.

APPENDIX

OF

STATISTICAL TABLES,

CONNECTED WITH THE SURVEY.

BOOK I.—BHAGULPOOR.

A.—Estimate of the population of the district of Bhagulpoor.

Division or Thanah.	Sects.			Employment.			Number of marriage-able girls remaining single at 15 years of age.
					Labourers.		
	Moslems.	Hindus.	Total.	Idlers.	Arti-ficers.	Culti-vators.	
Kotwali . . .	37125	61875	99000	25000	24500	49500	400
Ratnagunj . . .	52900	158700	211600	53000	13000	145600	100
Kodwar . . .	20200	44300	64500	6000	6000	52500	25
Lokmanpoor . .	39600	87100	126700	15800	7900	103000	200
Gogri . . .	28200	122300	150700	23500	7000	120000	50
Kumurgunj . .	5600	16900	22500	2800	5600	14100	25
Mungger . . .	11400	33900	45300	8000	10000	27300	200
Suryagarha . .	12375	27225	39600	9900	5000	24700	60
Mallepoor . . .	9750	146250	156000	19500	29200	107300	20
Tarapoor . . .	44900	134900	179800	22400	11200	146200	60
Bangka . . .	54000	172000	226000	13000	6000	207000	25
Fayezullahgunj . .	12700	76300	89000	5600	5600	77800	200
Paingti . . .	2100	6200	8300	600	2000	5700	3
Rajmahal . . .	54050	54050	108100	23600	13500	71000	125
Phutkipoor . .	3200	10000	13200	1650	1650	9900	110
Furrokhabad . .	5900	17700	23600	1100	1500	21000	100
Pratapgunj . .	23000	38500	61500	3800	9600	48100	150
Aurunggabad . .	16700	28000	44700	4300	2900	37500	30
Kalikapoor . .	26000	26000	52000	6500	3300	42200	50
Lakardewani . .	300	239700	240000	23000	7400	209600	200
Northern Mountaineers .	..	38000	38000	..	..	38000	..
Southern Mountaineers .	..	20000	20000	..	..	20000	..
Total .	460000	1559900	2019900	269050	172850	1578000	2133

B.—GENERAL STATISTICAL TABLE OF THE DISTRICT OF BHAGULPOOR.—*In Square Miles.*

Number.	Division or Thanah.	Extent in square miles.	Soil and Situation.									Manner of Occupation.																Commerce.		
			Rivers, tanks, marshes and water courses.	Liable to be under water.			Exempt from floods.					Altogether unfit for the plough or waste.							Fit for the plough, but allowed a fallow.		Actually occupied by farmers, who hold the plough.				Lands actually occupied by those who use the hoe alone.		Market places.	Exports. Rupees.	Imports. Rupees.
													Inundated of a good soil.		Exempt from floods, and a good soil.						Clay.		Free.						
				Clay.	Good free soil.	Light sandy soil.	Clay land.	Free soil.	Sandy or gravelly, light.	Level rocks, stones, and barren lands.	Hills.	Rivers, &c.	Clear or deserted.	Reeds, bushes, and trees.	Woods, bushes, and deserted villages.	Reeds, pasture, or deserted fields.	Broken corners, burial ground, roads, markets, and barren lands.	Hills.	Inundated.	High.	Inundated.	High.	Inundated.	High.	Level.	Hills.			
1	Kotwali	92	5	..	8	2	46	29	..	..	2	5	..	1	2	..	7	2	..	..	..	40	9	26	..	..	16	408500	345200
2	Ratnagunj	312	10	8	2	..	114	175	..	..	3	10	..	6	2	29	28	3	..	..	2	76	2	154	..	..	16	50500	11750
3	Kodwar	167	11	19	44	7	52	26	8	..	..	11	..	15	8	27	6	..	..	..	13	24	39	24	..	..	4	51250	6000
4	Lokmanpoor	481	31	156	121	35	39	89	10	..	..	31	..	96	1	1	22	..	..	..	102	36	102	90	..	..	13	315760	134795
5	Gogri	788	49	264	164	100	62	143	6	..	..	49	5	287	4	6	23	..	22	5	99	49	122	117	..	..	8	138900	38900
6	Kangwargunj or Kumurgunj	92	18	40	15	2	12	2	..	..	3	18	..	32	..	..	3	3	..	..	10	11	13	2	..	..	9	45040	4400
7	Mungger	113	15	16	26	21	24	9	..	..	2	15	..	16	..	..	4	2	3	..	16	22	26	9	..	..	16	522700	578880
8	Suryagarha	103	9	39	12	15	22	2	..	..	4	9	..	3	9	..	4	4	3	..	35	12	22	2	..	..	7	204850	101850
9	Mallepoor	697	18	10	..	..	404	90	6	35	134	18	..	..	222	56	46	134	..	38	10	130	..	43	..	..	5	30900	9700
10	Tarapoor	643	20	52	..	..	387	70	25	19	70	20	..	41	140	13	37	70	..	40	10	217	..	55	..	..	6	1000	..
11	Bangka	997	40	..	..	..	50	780	35	30	62	40	..	..	442	62	51	62	..	30	..	15	..	295	..	..	12	27100	19975
12	Fayezullahgunj	256	16	2	19	3	145	70	..	..	1	16	..	3	28	100	6	1	..	..	2	55	18	27	..	..	8	43400	20800
13	Paingti	56	14	..	17	1	18	4	..	..	2	14	..	3	6	12	1	2	..	..	..	3	14	1	..	..	3	13610	2855
14	Rajmahal	267	20	58	35	27	90	30	..	..	7	20	10	40	40	15	8	7	..	1	27	31	33	29	..	..	21	143500	241600
15	Phutkipoor	32	3	17	5	1	2	4	..	..	..	3	..	4	..	1	1	..	2	..	13	2	4	2	..	..	5	24550	4600
16	Furrokhabad	72	12	3	41	1	13	2	..	..	..	12	..	8	..	2	2	..	3	..	3	10	30	2	..	..	4	57050	17275
17	Pratapgunj	122	8	20	51	8	7	26	2	..	..	8	..	..	..	1	7	..	4	2	18	5	52	25	..	..	6	212100	51950
18	Aurunggabad	120	4	61	15	6	34	..	..	..	..	4	..	9	..	3	5	..	20	..	33	29	17	..	..	..	5	89400	59215
19	Kalikapoor	310	6	32	..	..	260	..	..	..	12	6	..	15	152	57	5	12	..	..	16	47	..	..	..	..	4	57350	26460
20	Lakardewani	919	19	..	..	..	241	500	54	45	60	19	..	..	412	33	65	60	..	..	..	120	.	210	..	..	1	65350	12245
21	Northern Mountaineers	920	20	..	..	..	50	30	..	200	620	20	..	..	63	9	200	520	..	..	..	..	..	3	5	100	..	..	..
22	Southern Mountaineers	666	16	..	..	..	150	100	..	100	300	16	..	..	200	34	100	264	..	..	..	..	..	12	4	36	..	..	..
	Total	8225	364	797	575	229	2222	2181	146	429	1282	364	15	585	1731	461	631	1146	57	116	409	934	503	1128	9	136	169	2502810	1688450

C.—*Proportion of Inundated Land in the Bhagulpoor District that is covered during the whole rainy season, and that is only occasionally covered.*

Constantly under water or mere barren channels 364 square miles; Regularly inundated throughout the rainy season 1199; Liable only to occasional floods but every year covered for some days at least 402; Entirely exempt from inundation 6260.

D.—*Manner in which the people of the District of Bhagulpoor are lodged.*

Families that are partly or in whole accommodated in houses built of brick 616; In houses that are not built of brick but are roofed with tiles 604; In houses built of clay with two stories 4679; In houses of one story with mud walls 94344; In houses with reed walls plastered with clay 137876; In houses with reed walls but not plastered 78542; In huts built like a bee hive 16584; Total 333245.

E.—*State of education in the district of Bhagulpoor.*

Men fit to act as writers born in the division 5135; Employed at home 2083; Employed abroad 1107; Not employed 1695; Strangers employed here as writers 1260; Men belonging to the district employed in the regular army 507; Employed in the police or revenue 4045; Employed abroad in the police or revenue 1581; Not employed 3585; Strangers employed in the police or revenue 1110.

F.—*Manner in which the Cultivated Lands of the District of Bhagulpoor are occupied.*

Number of houses 62475; Trees 59535; Bamboos 935; Kitchen gardens 42700, Vegetables in the fields 5615; Broadcast summer rice by itself 193100; Do. do. followed by Masur 9900; Do. do. do. among the stubble 350; Do. do. do. mixed with Linseed 6915; Do. do. do. with Barley 1400; Do. do. do. with Sarisha 2280; Do. do. followed by pease 11230; Do. do. followed by Khesari 4980; Do. do. followed by Mashkalai 10410; Do. do. followed by do. sown among the stubble 9800; Do. do. followed by Kuthi 110; Do. do. mixed with Arahar 2200; Do. do. followed by Pease mixed with Rayi 4875; Do. do. followed by Wheat 12325; Do. do. followed by Barley 11050; Do. do. followed by Wheat mixed with Sharisha; Do. do. followed by Barley mixed with Rayi 750; Do. do followed by But or Chana 9985; Do. do. followed by Kabali But 1525; Do. do. followed by But mixed with Masur; Do. do. followed by But mixed with Wheat 750; Do. do. followed by But mixed with Barley 1400; Do. do.followed by But mixed with Linseed 975; Do do. followed by But mixed with Sarisha 150; Do. do. followed by Linseed 5280; Do. do. followed by Linseed mixed with Sarisha; Do. do. followed by Sarisha 8225; Do. do. followed by Seuti Sarisha 600; Do. do. followed by Rayi sown among the stubble 350; Do. do. mixed with Kangni 1200; Do. do. followed by Vaisakhi China 855; Do. do. followed by Rarhiya Cotton 150; Do. do. followed by Rarhiya Cotton mixed with Pease 400; Do. do. followed by Rarhiya cotton mixed with Sarisha 300; Do. do. mixed with Barabangga cotton 230; Transplanted summer rice by itself 43775; Broadcast Sati rice by itself 6585; Do. Jali by itself 2700; Do. Kartika by itself 1550; Transplanted winter rice by itself 772775; Do. do. followed by Khesari sown among the stubble 143550; Broadcast winter rice by itself 1513310; Do. do. followed by Khesari sown among the stubble 156880; Do. do. followed by But sown among the stubble 1800; Do. do. mixed with Harimung 21500; Spring rice 5690; Kangni by itself 2840; Kherisamora by itself 36950; Kheri by itself 35470; Do. followed by Masur 1400; Do. followed Masur mixed with Linseed 2150; Do. followed by Pease 1300; Do. followed by Pease mixed with Barley 750; Do. followed by Khesari 1100; Do. followed by Mashkalai or Urid 1600; Do. followed by Kulthi 3000; Do. mixed with Arahar 2100; Do. followed by Wheat 3400; Do. followed by Barley 2350; Do. followed by But or Chana 1750; Do. followed by But mixed with Linseed 100; Do. followed by Sarisha 2500; Do. followed by Sarso 1300; Do. followed by Rayi 100; Do followed by Rayi mixed with Linseed 600; Do. followed by Bhujaru cotton 625; Maruya transplanted by itself 860; Do. broadcast by itself 60550; Do. followed by Masur 3800; Do. followed by Masur mixed with Linseed 200; Do. followed by do. mixed with Barley 900; Do. followed by Pease 550; Do. followed by Pease mixed with

Barley 1100; Do. followed by Pease mixed with Rayi 550; Do. followed by Khesari; Do. followed by Kulthi 8800; Do. mixed with Tulbulikalai 300; Do. mixed with Arahar 8250; Do. mixed with Arahar and Ricinus 2400; Do. mixed with Arahar and Kangni; Do. mixed with Bora 150; Do. mixed Kangni 300; Do. followed by Wheat 12325; Do. followed by Barley 8750; Do. followed by But 1600; Do. followed by But mixed with Barley 450; Do. followed by But mixed with Linseed 150; Do. followed by Sarisha 7400; Do. followed by Rayi 200; Do. followed by Linseed 100; Do. followed by Rarhiya Cotton mixed with Gota 900; Do. followed by Rarhiya Cotton mixed with Gota and Pease 50; Maize by itself 139290; Do. followed by Masur 4750; Do. followed by Masur mixed with Linseed 3100; Do. followed by Pease 2800; Do. followed by Pease mixed with Barley 4100; Do. followed by Pease mixed with Khesari and Barley 1000; Do. followed by Khesari 500; Do followed by But 9350; Do. followed by But mixed with Barley 1400; Do. mixed with Arahar 33450; Do. mixed with Arahar and Recinus 7750; Do. mixed with Arahar, Kangni and Barabangga Cotton 30; Do. Do. mixed with Bora; Do. followed by Wheat 17250; Do. followed by Barley 13450; ·Do. followed by Barley mixed with Sarisha 1200; Do. followed by Sarisha 25950; Do. followed by Sarisha mixed with Rarhiya Cotton 100; Do. followed by Rayi 1200; Do. followed by Linseed mixed with Sarisha 850; Do. followed by Vaisakhi China 500; Do. mixed Kangni 250; Do. mixed with Barabangga Cotton 550; Do. mixed Gajar Cotton 1760; Do. mixed with Gajar Cotton and Recinus 1640; Do. mixed with Kartika Cotton and Recinus 2900; Kodo by itself 14300; Do. followed by Masur 550; Do. followed by Masur mixed with Linseed 1400; Do. followed by Masur mixed with Rayi and Linseed 600; Do. followed by Pease; Do. followed by Mashkalai 200; Do. mixed with by Arahar 3355; Do. mixed with Arahar and Recinus 50; Do. followed by But 100; Do. followed by Wheat 1750; Do. followed by Barley 2550; Do. followed by Barley mixed with Pease 250; Do. followed by Sarisha 700; Do. followed by Rayi 1000; Do. followed by Linseed 1000; Do. followed Linseed mixed with Rayi 50; Janera Gohama by itself 9205; Do. Chauliya by itself 200; Do. mixed with Til 650; Do. mixed with Til and Bhetmas 50; Do. mixed with Recinus 50; China Asharhi by itself 3400; Do. Bhadai by itself 580; Do. Kurtika by itself 100; Do. Maghi by itself; Do. Vaisaki 11870; Do. do. followed by Masur 600; Do. do. followed by Field Pease mixed with Barley 1200; Do. do. followed by Wheat 600; Do. do. followed by Rayi 250; Do. Asharhi followed by Vaisakhi China 1100; Do. Bhadai followed by Vaisakhi China 250; Gundli by itself 7860; Nauya Gundli by itself 2680; Gundli followed by Kulthi 2860; Bhetmas by itself 925; Wheat by itself after culture 393985; Do. sown in the mud without previous culture 200; Do. mixed with Masur 3000; Do. mixed with But 3750; Do. mixed with Sarso 11450; Do. mixed with Rayi 1000; Barley by itself after regular culture 231900; Do. sown among the mud without previous culture 500; Do. mixed with Masur 2200; Do. mixed with Pease (Jaokeras) 66850; Do. mixed with Pease and Khesari (Jaokeras) 19500; Do. mixed with But 2200; Do. mixed with Sarisha 2900; Do. mixed with Rayi 500; Do. mixed with Linseed 800; Masur by itself 32850; Do. mixed with Barley 160; Do. mixed with Linseed 15335; Do. mixed with Linseed and Sarso 3400; Do. mixed with Sarisha 3590; Field Pease Maghi by themselves 48700; Do. Vaisakhi by themselves 49700; Do. Kabali by themselves 7750; Do. mixed with Rayi and Khesari 5000; Do. mixed with Rayi or Mustard 10230; Khesari sown in the mud without culture 1100; Do. by after cultivation 31850; Mashkalai by itself after cultivation 136985; Do. sown in the mud without culture 146525; Tulbulikalai by itself 180; Kulthi by itself 147930; Harimung by itself 200; Mahananda or Sehamung by itself 2250; Methkalai by itself 4500; Suthrakalai by itself 200; Maghi Arahar by itself 2600; Vaisakhi Arahar by itself 19680; Do. do. mixed with Bhetmas 970; Do. do. mixed with Tulbuli 75; Do. do. mixed with Harimung 650; Do. do. mixed with Recinus (Vaghrengri) 400; Do. do. mixed with Recinus (Chanka) 400; Bora or Gangra by itself 10150; Do. or Chhota Gangra by itself 5000; But by itself 79450; Do. or Chana mixed with Barley 1225; Do. do. mixed with Linseed 29200; Do. do. mixed with Linseed and Rayi 150; Do. do. mixed with Sarisha 3250; Kabali But by itself 6490; Sarisha, Gota, Lotni, Turi or Maghuya by itself 90170; Sarso or Pingri by itself 46250; Rayi, Reingchi, or Mustard by itself 74800; Gangrayi by itsetf 9550; Rayi or Mustard sown without any previous culture 2550; Sarisha or Gota mixed with Linseed 150; Sarso mixed with Safflower 440; Senti Sarisha by itself 1100; Linseed by itself 16250; Linseed mixed with Safflower 100; Til by itself 22655; Charak Til by itself 5000; Sargujiaya by

itself 5100; Patuya or Meghnal by itself 2560; Do. followed by Sarisha 20; Amliya Chandana and Kudrum by itself 2315; Chandana or Kudrum mixed with Arahar 90; Sar or Kasmira by itself 1280; Tobacco by itself (Mandhata) 8110; Do. (Thariya) by itself 2[illegible]5; Gangja (Hemp) by itself 30; Betleleaf 261; Sugar cane (Khagri) by itself 6270; Do. (Paungdi) 4700; Do. (Raungda) 1700; Do. (Karuya) 600; Do. (Nargori) 3603; Do. Mango 2000; Cotton (Barabangga) by itself 400; Do. (Rarhiya) by itself; Do. (Bhujaru) by itself 395; Do. (Gajar) by itself 530; Do. (Bhoga) by itself 230; Do. (Athiya) by itself 25; Do. (Barabangga) mixed with Suthni 530; Do. do. mixed with Ricinus 395; Do. (Rarhiya) mixed with Gota or Sarisha 940; Do. do. mixed with Sarisha and Mahanandamung 300; Do. do. mixed with Gota and Pease 200; Do. (Bhujaru) mixed with Kulthi 40; Do. do. mixed with Mung or Sehamung; Do. do. mixed with Rayi 16; Do. do. mixed with Safflower 50; Do. do. mixed with Ricinus or Eringri 40; Do. do. mixed with Ricinus, Safflower, and Rayi 125; Do. (Gajar) mixed with Ricinus 310; Indigo by itself for the plant alone 17575; Do. by itself for seed and plant 4360; Do. for seed alone 1080; Do. mixed with Masur 2000; Do. mixed with Pease 900; Do. mixed with Mashkalai 5980; Do. mixed with Kulthi 3540; Do. mixed with Maize 140; Do. mixed with Wheat 500; Do. mixed with Barley 1100; Do. mixed with Sarisha 11380; Do. mixed with Rayi 4010; Do. mixed with Sarisha for plant and seed 60; Do. mixed with Linseed 2150; Do. mixed with Bhujaru Cotton 1000; Mulberry by itself 2350; Safflower by itself 390; Do. mixed with Pease 70; Do. mixed with Pease and Ricinus 40; Do. mixed with Turi or Gota 50; Do. mixed with Reingchi 125; Do. mixed with Ricinus 20; Ricinus by itself 1960; Do. mixed with Sarisha 860; Carrots by themselves 650; Do. mixed with Safflower 50; Suthni by itself 215; Do mixed with Arahar 250; Do. mixed with Kartikabangga or Cotton 25; Do. mixed Barabangga Cotton and Ricinus 250; Potatoes by themselves 100; Ginger by itself 550; Do. mixed with Suthni 20; Turmeric by itself 810; Do. mixed with Vaisakhi China 40; Do. mixed with Barabangga (Cotton) 50; Do. mixed with Ricinus 50; Peyaj (Sangchi and Dhemra) or Onion by itself 1035; Do. or Onion mixed with Suthni 100; Garlic by itself 530; Jira by itself 60; Dhaniya by itself 240; Ajoyan by itself after cultivation 95; Do. sown on the bank of rivers without ploughing 1195; Mauri or Saongp by itself 120; Methi by itself 305; Chandani or Randhuni by itself 340; Kalijiri or Mangrela by itself 40; Seedling land by itself 23775;—Total 5681280.

G.—*General Abstract of the value and produce of lands occupied by farmers who cultivate with the plough in the District of Bhagulpoor.*

Fruit trees value of fruit in Rupees 215895; Bamboos value cut annually in Rupees 2357; Vegetables, &c. in gardens and fields value in Rupees 254385; Grain—*Rice*—Quantity in Mans 19235950; Value in Rupees 10259757; Quantity remaining for consumption after deducting seed 18399605. *China, Kangni, Kheri, Maruya, Maize, Kodo, Jenara and Gundli*—Quantity of Mans 2664791; Value in Rupees 1306395; Quantity remaining for consumption after deducting seed 2566998. *Wheat and Barley*—Quantity in Mans 4305092; Value in Rupees 2810272; Quantity remaining for consumption after deducting seed 3974309. *Pulse*—Quantity in Mans 3768152; Value in Rupees 2270465; Quantity remaining for consumption after deducting seed 3538570. *Sarisha, Linseed, and Til*—Quantity in Mans 891807; Value in Rupees 1028422; Quantity remaining for consumption after deducting seed 874092. *Sugarcane*—Quantity in Mans 168380; Value in Rupees 278108. Plants for making thread and rope—*Pata and San.*—Quantity in Mans 18093; Value in Rupees 22715. *Cotton*—Quantity of Mans 20974; Value in Rupees 57881. Plants for smoking and chewing—*Betle leaf*—Value in Rupees 36700; *Tobacco*—Quantity of Mans 29806; Value in Rupees 63247. *Gangja*—Quantity of Mans 130; Value in Rupees 1866. Plants used for dying—*Indigo, Plants*—Value in Rupees 102172. *Seed*—Quantity in Mans 3273; Value in Rupees 10213. *Safflower flower*—Quantity in Mans 190; Value in Rupees 1799. *Seed*—Quantity of Mans 1216; Value in Rupees 1139. Plants for rearing silk-worms. *Tut or Mulberry*—Value in Rupees 40400. *Ricinus*—Value in Rupees 27823. Medicine—Quantity in Mans 80; Value in Rupees 144; Quantity remaining for consumption after deducting seed 78. Total value of each Thanah as follows—Kotwali 512983; Ratnagunj 1582508; Kodwar 590653; Lokmanpoor 1939656; Gogri 2311469; Kangwargunj 196294; Mungger 480402; Suryagarha 420661; Mallipoor 1202907; Tarapoor 1674299; Bangka 2124065; Fayezullah-

gunj 631772; Paingti 119146; Rajmahal 790159; Phutkipoor 109117; Furrokhabad 258011; Pratapgunj 681891; Aurunggabad 501436; Kalikapoor 740347; Lakardewani 1924377; Grand Total Rupees 18792162.

H.—*Estimate of the Live Stock in the District of Bhagulpoor.*

Number of Bulls reserved for breeding 5421; Value 51780 rupees. Bulls wrought in the plough, belonging almost entirely to the high casts 58115; Value 322290. Oxen used in wheel carriages 922; Value 16045. Do. used in carts 4424; Value 57514. Do. used for carrying back loads belonging to traders 22320; Value 246985. Do. used carrying back loads belonging to farmers 3535; Value 34870; Do. used for carrying back loads belonging to the high castes 3345; Value 29845. Do. used both in the plough and for carrying loads or to draw carts 82400; Value 509600. Do. used in machinery 4710; Value 20930. Do. used in the plough alone belonging to the high casts 130570; Value 936235. Do. used in the plough alone belonging to tradesmen 53180; Value 367875. Do. used in the plough alone belonging to mere farmers 595235; Value 3959707½. Buffaloes used in the plough and carts 1200; Value 9400. Cows belonging to the high castes 269825; Value 1610575. Do. belonging to tradesmen 180520; Value 1019320. Do belonging to farmers 781420; Value 4577385. Do. wrought in the plough 200; Value 800. Young Cattle. Old Cattle. Buffaloes young and old 35160; Value 490725. Goats grown females 191400; Value 80718¾. Sheep called Bheri grown females 3100; Value 1687½. Do. called Garar breeding females 5700; Value 3162½. Swine total 16390; Value 12402½. Horses preserved for carrying loads 1945; Value 12557½. Asses 225; Value 525. Camels 2; Value 220. Total Number 2451264. Total value 14373155½ rupees.

I.—*Estimate of the quantity of milk procured by the owners of cattle in the District of Bhagulpoor and of its value.*

Total Number of Cows 1231965; Do. giving milk 615982; Total milk in *mans* 2185684; Total value of milk in rupees 2091901; Total number of Buffaloes 35160; Number giving milk 17580; Total milk in *mans* 116030; Total value of milk in rupees 106364; Total milk in *mans* 2301714; Total value of milk in rupees 2198266.

K.—*Estimate of the number of Artists in the District of Bhagulpoor.*

1. Picture painters 16; 2. Mirasin 5; 3. Bais 16; 4. Khelonis 4; 5. Jhumriyas 10; 6. Natuyas 145; 7. Domnadomnis 10; 8. Bhangrs 18; 9. Bishaharis 6; 10. Kirtaniyas 76; 11. Bhaganiya Kirtanigas 670; 12. Pirergayans 1; 13. Piranis 10; 14. Badyakars or Bajaniyas 4116; 15. Tasawalehs 390. 16. Nahabatwalehs 89; 17. Daphalis 58; 18. Nariyal 15; 19. Bazigurs 11; 20. Chambas 36; 21. Washermen 1862; 22. Shawl washermen 5; 23. Soap makers 1; 24. Tallow candle makers 3; 25. Torch makers 4; 26. Taylors 250; 27. Tent makers 1; 28. Barbers 2284; 29. Helas 4; 30. Nats 11; 31. Missiwalehs 11; 32. Red lead makers 5; 33. Laheri or makers of lac ornaments 249; 34. Churisaz or bracelet makers 28; 35. Sakhari or shell cutters 22; 36. Malis or garland makers 348; 37. Inn makers 3; 38. Mat makers 382; 39. Thatchers 600; 40. Dom or Bangsphor or basket makers 796; 41. Paper makers 96; 42. Book binders 1; 43. Shoe makers or Chamar 1669; 44. Dabgar or leathern bag makers 4; 45. Atushbaz or preparers of fire works 44; 46. Preparers of Tobacco or Tamakuwalehs 286; 47. Charcoal ball makers 7; 48. Majunwalehs 1; 49. Distillers 132; 50. Pachuiwaleh or brewer 1; 51. Pasis or Tariwalehs 481; 52. Oil makers or Telis 2485; 53. Dahiyar Goyalas 3740; 54. Makhaniya Goyalas 3; 55. Mayra or sweet meat makers 1; 56. Murari or sweet meat makers 1; 57. Halwais or sweet meat makers 616; 58. Puya and Phulauriwalehs 100; 59. Bharbhuna or Chabena furosh 1033; 60. Flower grinders 31; 61. Dalharis 50; 62. Nanwais 17; 63. Bukurkussab butchers 18; 64. Kussab butchers 42; 65. Bawarchis cooks 11; 66. Lohar or Barhai, who make the whole of the implements of agriculture and coarse of furniture 1340; 67. Carpenters who only make finer furniture 73; 68. Carpenters who only make the wooden parts of the implements of agriculture and coarse furniture and boats 360; 69. Jappani Nukas or painters of furniture 20; 70. Nukkash or house, boat, and palanquin painters 6; 71. Piyuri or yellow paint makers 7; 72 Sawers 25; 73. Turners or Kharadis 65; 74. Kanggaiwaleh or hair comb makers 6; 75. Potters

1177; 76. Image makers 27; 77. Brick makers 60; 78. Brick layers 218; 79. Lime burners 32; 80. Stone cutters 60; 81. Goldsmiths 725; 82. Kasera and Thatera who make vessels of copper, brass and bell metal 458; 83. Bidriwalehs 1; 84. Rangdhaluya who work in tin and pewter 49; 85. Kalaigar who tin copper and brass vessels 6; 86. Naychahbund who make flexible tubes for smoking 20; 87. Kol who smelt iron 320; 88. Lohars who only make the iron work of the impliments of agriculture on coarse work for country use and forge crude iron 281; 89. Blacksmiths who only make finer work 107; 90. Koftgur or inlayers and platers 1; 91. Needle maker or Suiwalehs 2; 92. Cutlers or Sangurs and Sikulgurs 40; 93. Dhuniya or cotton cleaners 1185; 94. Spinners of cotton 168975; 95. Dyers or Rungrezs 94; 96. Weavers who work in Tasar and silk 1138; 97. Do. of cotton cloth 6212; 98. Do. of cotton carpets 3; 99. Tape makers or Newargurs 19; 100. Patwars who knit strings 88; 101. Chintz makers 9; 102. Blanket weavers 157; 103. Indigo factories 32; 104. Nuniyas who make salt-petre 174.

L.—*Value in Rupees of the Goods Exported and Imported annually from and into the District of Bhagulpoor.*

Rice Exports Rupees 84900; Imports Rupees 137525. Wheat, Export 421700; Import 84500. Barley, Export 3650; Import 1200. Maize Export 4850; Import 1700. Janera, Export 8000; Import 2200. China, Export 200. Maruya, Export 2100; Import 1600. Jaokerao, mixture of barley and pease, Export 11600; Import 7000. Chana or but, Export 89400; Import 30000. Kabali but, Export 4700. Arahar, Export 44940; Import 5200. Pease, Export 18300; Import 2600. Bora, Export 3400. Mung, Export 1600. Urid or Mashkalai, Export 46950; Import 4400. Khesari, Export 8750; Import 4500. Masur, Export 15300; Import 2200. Kulthi, Import 1100. Rape and Mustard seed, Export 123150; Import 21650. Til, Export 8000; Import 350. Linseed, Export 25500; Import 2000. Castor oil seed, Import 900; Oil, Export 2200; Import 1250. Ghiu or boiled butter, Export 122950; Import 70200. Milk, Import 10000. Coast salt or Karkach, Export 1100; Import 75900. Bengalese salt or Pangga, Export 193600; Import 509450. Sugar, Import 9860. Extract of Sugar cane, Export 17150; Import 19450. Treacle or Chhoya, Import 3750. Sukkur or coarse suggar, Import 6550. Honey, Export 350. Betlenuts, Export 1800; Import 28130. Cocoa nuts, Import 460. Tobacco, Export 9150; Import 51000. Hempbuds or Gangja, Import 3800. Indigo, Export 712100. Opium, Import 3200. Mahuya flowers, Import 1000. Turmeric, Import 600. Dry ginger, Import 200. Betle leaf, Export 60; Import 375. Safflower, Export 310. Jira seeds, Export 6000; Import 6250. Ajoyan, Export 6100; Import 200. Pasari goods, Export 18750; Import 56650. Wax, Export 700; Import 280. Catechu or Kath, Export 22000. Lac, Export 9900. Copper, Import 1400. Pewter or Justah, Import 16050. Tin or Rangga, Export 2250; Import 14525. Lead, Export 2300; Import 9500. Iron, Export 13750; Import 36100. Brass and bell-metal vessels, Export 15000; Imports 49850. Iron wares, Export 6000; Import 100. Pata or hemp of Corchorus, Import 2115. Sack cloth and bags Import 3950. Kasmiri San or hemp of Crotolaria, Export 400; Import 885. Cotton wool, Import 283000. Do. thread, Import 1450. Do. cloth, Export 6500; Import 45800. Cocoons or Tasarguti, Export 10300; Import 10000. Bhagulpoori cloth, Tasar and cotton mixed, Export 201000. Silk cocoons, Export 50000. Pure silk cloth, Export 300; Import 7300. Silk thread, Export 52000; Import 500. Maldehi, Masru and other cloths of silk and cotton mixed, Import 3500. Tasar cloth, Import 100. Chints, Import 8350. Woollen carpets and blankets, Import 1930. Gold thread, Import 100. Shawls, Import 2000. Perfumes, Import 700. Shoes, Import 600. Chank shells and ornaments, Export 500; Import 1900. Manihari goods, Export 800; Import 3320. Paper, Import 150. Wooden furniture, Export 5300. Timber of Sakuya, Sisau, &c. Import 5725. Timber for posts, beams and planks, Export 2200; Import 2100. Fire wood, Export 17150. Charcoal, Export 47450. Canoes, Import 220. Nal, Sap and Kus mats, Export 1400; Import 750. Reeds and grass, Export 600; Import 2100. Sabe rope, Export 50. Sal leaves, Export 50. Dhuna, Export 200. Fish, Export 2800; Import 1500. Swine, Export 200. Buffaloes, Export 1000. Oxen and cows, Export 5500; Import 1500. Lime, Export 700. Stone wares, Export 2800; Import 200. Kharimati, Export 2600. Singing birds, Export 500. *Total Exports* Rupees 2502810; *Total Imports* Rupees 1688450.

MARKET TOWNS IN BHAGULPOOR.

Division I. Under Thanah Kotwali.—MARKET PLACES.—Shujagunj. Mozahedpoor. Saray. Yogsar. Munshurgunj. Khunjurpoor. Mayagunj. Kazichaok. Enayetgunj. Nathnagar. Champanagar. Lakshmigunj. Sahebgunj. Barari. Mahadinagar. Kotubgunj.

No. II. Division under Thanah Ratnagunj.—MARKET PLACES.—Ratnagunj. Hat Ratnagunj. Hat Badshahgunj. Bazar Amarpoor. Hat Payen. Hat Nurgunj. Katsob. Kusmaha. Dustpoor. Duriyapoor. Karjeli. Gobrachauki. Andhari. Nawada. Amdaha. Dighi.

No. III. Division under Thanah Kodwar.—MARKET PLACES.—Soulutgunj. Biswaskhani. Chandpoor. Durgagunj. Duriyapoor.

No. IV. Division under Thanah Lokmanpoor.—MARKET PLACES.—Bazar Bihipoor or Parasurampoor. Hasurgunj. Bhamarpoor. Madhurapoor. Ladmar. Krishnagunj. Purni. Choranda. Bhawanlpoor. Pangchgachhiya. Sohanigunj. Sibgunj. Viswanathgunj.

No. V. Divison under Thanah Gogri.—Bazar Kusbah Gogri. Bahulpoor. Nandalalgunj. Raghunathgunj. Mahesgunj. Ramgunj. Simrir. Setonabad.

No. VI. Division under Thanah Kumurgunj.—MARKET PLACES.—Chichraun. Afzungunj. Sultangunj. Kusbah Jahanggira. Saray Kumurgunj. Ghorghat. Kathgola. Mahadeva. Nauyagarhi.

No. VII. Division under Thanah Mungger.—MARKET PLACES.—Barabazar. Gararbazar. Belanbazar. Batemangunj Puranigunj. Muksuspoor or Kalithan. Foujdari bazar. Dehuri bazar. Chaok or Wesly bazar. Topkhanah bazar. Mogul bazar. Keoramaydan. Laldarwaja. Lalupokhariya. Kuttitola. Kasema bazar. Supiabad. Hasungunj.

No. VIII. Division under Thanah Suryagarha.—Suryagarha. Jakarpoor. Katihara. Moulanagar. Medanichak. Nawabgunj. Rampoor. Rasulpoor.

No. IX. Division under Thanah Mallepoor—MARKET PLACES.—Mallepoor. Jamui. Sono. Pangchrukhi. Khorma.

No. X. Division under Thanah Tarapoor.—MARKET PLACES.—Bazar Gazipoor. Tarapoor. Argusgunj. Belwari. Mozuffurgunj. Kharakpoor.

No. XI. Division under Thanah Bangka.—MARKET PLACES.—Bazar Bangka. Hat Lakhluri. Hat Bayesi. Sabalpoor. Futehgunj. Hat Dangre. Korba. Gokula. Gopalgunj or Jamdaha. Jaypoor. Chandan. Kathan.

No. XII. Division under Thanah Fayezullahgunj.—MARKET PLACES. — Hat Badlugunj. Gajarajgunj. Pyalapoor. Dirghi. Kumalpoor. Krishnadaspoor. Kusbah Kahalgang. Narayanvati.

No. XIII. Division under Thanah Paingti.—MARKET PLACES.—Hat Sahebgunj Ganggaprasad. Bazar Paingti.

No. XIV. Division under Thanah Rajmahal.—MARKET PLACES.—Bazar Neyamutullah Kan. Kachcha Saray. Katra. Matsyabhuvan. Sirsigali. Kasemgunj. Shurifah bazar. Gudagunj. Imamgunj. Pirgunj Ratnagunj. Saiud bazar. Pandariba. Sulimpoor. Hat Kathgola. Atapoor. Katigunj. Sakrigali. Chapujan. Araitikar. Kochpara. Mohubbutpoor. Masaha.

No. XV. Division under Thanah Phutkipoor.—MARKET PLACES.—Hat Udhawanala. Surfurazgunj or Phutkipur. Bazar Babulbana. Begumgunj. Serasan.

No. XVI. Division under Thanah Furrokhabad.—MARKET PLACES.—Saray Furrokhabad. Nayansuk. Jhamar. Kharirdangra or Beoya.

No. XVII. Division under Thanah Pratapgunj.—MARKET PLACES.—Hat Shumshergunj. Anupnagar. Mahadevnagar or Naya Hat. Pratapgunj. Chaukarhat. Mahangunj. Deonapoor.

No. XVIII. Division under Thanah Aurunggabad.—Hat Manggalpoor or Herbertgunj. Hat Kaligunj. Bhawanivati. Dewanahpoor or Ekhtiyargunj. Jafurgunj.

No XIX. Division under Thanah Kalikapoor.—MARKET PLACES.—Hat Kalikapoor. Dubrajpoor. Nurai. Virkati.

No. XX. Division under Thanah Lakardewani.—MARKET PLACES.—Hat Nuni. Bamankheta. Hasdiha. Dhanbe. Heduya. Kayerbangk. Dumariya. Joka. Madhuban. Gidhini. Amarpani. Jaratal. Kerokhatesari. Satpahari. Dodhane. Keduya. Gargariya. Kangjiya. Kesari. Nawadi. Jarka. Rampoor Marikadi. Rayikadari. Badhiyadi. Parpa. Birajpoor. Jarmuri. Bangskimanda. Lakardewani. Khayerbani. Jiraliya. Baluyadabar. Harayamerdi. Supchala. Chandna. Rora. Gormala. Kumrabad. Kadai. Futehpoor. Asansol. Dumka. Dharampoor. Dudhuya.

BOOK II.—GORUKHPOOR.

A

ESTIMATE OF THE POPULATION OF THE NORTHERN PART OF THE DISTRICT OF GORUKHPOOR.

Division or Thanah.	Sects.			Employment.				Number of marriageable girls remaining single at 15 years of age.
					Plebeians.			
	Muhammedans.	Hindus.	Total Families.	Gentry.	Traders.	Artificers.	Ploughmen.	
Gorukhpoor . .	1974	4147	6121	1712	1077	1983	1349	60
Mansurgunj . .	307	23572	23879	6010	132	1384	16353	25
Parraona . . .	2067	18299	20366	5640	373	4283	10100	100
Keseya . . .	347	7859	8206	2450	70	578	5108	5
Belawa . . .	438	5203	5641	835	59	362	4385	3
Selempoor Majhauli .	629	12869	13498	6799	380	1207	5112	..
Bhagulpoor . .	202	15495	15697	7910	367	888	6532	..
Barahalgunj . .	118	10690	10808	6710	105	404	3589	5
Gajpoor . . .	510	11358	11868	5985	527	1438	3918	..
Bhewopar . . .	98	7252	7350	3850	76	442	2982	5
Onaula . . .	78	3765	3843	2600	57	294	892	10
Gopalpoor . . .	321	9142	9463	7476	199	963	1125	100
Sanichara . . .	596	16586	17182	8665	173	1156	7188	20
Mauhuyadabar . .	693	9533	10226	3960	263	1669	4334	25
Khamariya . . .	656	19539	20195	10236	224	2439	7296	50
Vazirgunj . . .	285	6983	7268	3930	132	1261	1945	115
Nawabgunj . .	493	566	1059	143	292	400	224	10
Manikapoor . .	138	7688	7826	3956	90	600	3180	10
Lalgunj . . .	305	4974	5279	3320	80	319	1560	5
Dumariyagunj . .	3262	12639	15901	7556	198	1533	6614	100
Basti . . .	1172	6113	7285	2346	266	1345	3328	100
Magahar . . .	3329	9731	13060	6650	307	1707	4396	100
Bakhira . . .	195	1948	2143	818	75	295	955	15
Bangsi . . .	1884	17970	19854	10030	316	1378	8130	100
Dhuliyabhandar . .	1	2	3	2	1	..	..	..
Lotan . . .	92	6537	6629	3365	82	382	2800	25
Pali	1	213	214	6	15	17	176	..
Nichlaul . . .	384	5851	6235	2254	90	886	3005	10
Total .	20575	256524	277099	124884	6026	29613	116576	998

B.—GENERAL STATISTICAL TABLE OF THE NORTHERN PART OF THE DISTRICT OF GORUKHPOOR.

Division or Thanah.	Extent in square miles.	Soil and situation.												Manner of occupation.												Commerce.	
		Rivers, tanks, marshes, water-courses.	On the level part of the district.										Hills.	Altogether unfit for the plough or waste.								Actually occupied by farmers who hold the plough.					
			Liable annually to be under water.					Exempt from regular floods.						Rivers, &c.	Hills.	Level land.					Fit for the plough but allowed a fallow.	Clay.		Free.		Market places.		
																Inundated of a good soil.		Exempt from floods and of good soil.										
			Clay.	Free moist soil.	Good free soil.	Light sandy soil	Barren sand.	Clay land.	Free moist soil.	Free dry soil.	Sandy or gravelly light.	Level rocks, stones, and barren lands.				Clear or deserted.	Reeds, bushes and trees.	Woods, bushes, & deserted villages.	Reeds, pasture, &c.	Broken corners, burial grounds, roads, markets, and barren land.		Inundated.	High.	Inundated.	High.		Exports.	Imports.
																											Rupees	Rupees
Gorukhpoor	4	..	..	..	..	..	..	1	1	2	..	..	..	..	..	1	..	..	..	..	..	..	1	..	2	1	601444	305767
Munsurgunj	812	13	..	98	..	..	..	..	..	700	..	1	..	13	..	..	73	250	25	14	183	..	..	24	230	11	32850	11720
Parraona	546	17	..	34	..	..	..	..	291	136	64	4	..	17	..	..	7	68	103	18	85	..	..	13	235	34	164721	94628
Keseya	129	2	..	..	4	..	..	..	50	67	..	6	..	2	..	..	1	8	23	10	12	..	..	2	71	3	12473	18818
Belawa [hauli	113	3	3	1	3	..	..	22	27	54	..	..	..	3	..	..	1	1	40	4	..	2	8	4	50	16	2050	2718
Salempoor Maj-	296	8	3	4	7	..	..	20	25	193	..	36	..	8	..	..	6	14	172	6	..	1	1	7	81	16	56008	6010
Bhagulpoor	168	13	6	3	49	..	..	..	26	71	..	..	..	13	..	3	..	..	34	7	..	5	..	46	60	8	76600	8121
Barahalgunj	128	22	9	..	38	..	..	28	..	31	..	..	..	22	..	4	4	8	..	2	..	5	26	31	26	1	7694	25555
Gajpoor	336	8	75	..	41	..	..	121	..	80	..	11	..	8	..	..	64	100	..	21	..	31	48	14	50	7	54814	6612
Bhewopar	81	15	13	9	..	5	..	1	..	33	1	4	..	15	..	1	3	10	2	6	..	12	10	..	22	4	29120	23066
Onaula	104	1	..	..	..	..	..	60	..	17	6	20	..	1	..	..	..	20	26	21	..	..	23	..	13	1	8200	10
Gopalpoor	327	15	63	27	..	30	..	109	..	78	..	5	..	15	..	68	11	76	5	13	..	24	71	17	27	11	119206	40803
Sanichara	374	18	..	..	56	..	11	162	77	50	..	..	..	18	..	14	12	49	50	20	..	..	129	28	54	8	22102	17818
Mauhuyadabar	212	13	24	..	4	..	4	52	27	78	..	10	..	13	..	..	..	25	24	18	..	24	37	4	67	7	35138	18800
Khamariya	225	21	..	9	..	4	8	81	58	..	34	10	..	21	..	..	5	..	21	27	..	..	77	7	67	7	336312	241798
Vazirgunj	210	13	6	20	..	7	6	71	84	..	..	3	..	13	..	6	6	14	..	17	..	..	55	20	79	3	81311	23601
Nawabgunj	1	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	1	188568	181668
Manikapoor	110	2	..	..	..	..	..	55	27	..	20	6	..	2	..	..	..	6	2	11	..	..	48	..	41	4	4250	3679
Lalgunj	63	1	..	..	..	..	..	23	25	..	11	3	..	1	..	..	..	18	3	5	..	..	14	..	22	3	450	2561
Dumariyagunj	326	15	8	8	..	16	..	187	72	..	..	20	..	15	..	..	16	60	22	29	..	8	112	8	56	3	10650	24912
Basti	208	3	..	..	..	..	..	76	52	..	64	13	..	3	..	..	..	61	35	18	..	..	56	..	35	2	57806	41573
Magahar	360	22	..	23	..	45	..	179	..	76	..	15	..	22	..	23	9	67	35	24	..	..	86	34	60	6	108121	87118
Bakhira	46	11	..	..	..	..	..	12	5	..	16	2	..	11	..	..	..	5	6	3	..	..	8	..	13	1	11157	19873
Bangsi	687	43	16	37	..	12	..	225	137	..	170	47	..	43	..	12	36	86	282	56	..	16	84	..	72	3	104768	62535
Dhuliya Chandar	130	2	..	..	..	..	..	96	..	..	24	8	..	2	..	..	..	30	88	8	..	..	2	..	..	..	..	..
Lotan	253	8	34	20	..	9	..	49	107	..	..	26	..	8	..	9	43	79	30	29	..	7	11	3	34	3	2887	5389
Pali	552	17	9	..	..	..	..	..	336	..	156	34	..	17	..	..	9	171	276	36	13	..	..	..	30	1	2620	1856
Nichlaul	622	19	..	29	122	..	..	..	140	290	..	6	16	19	16	..	33	129	77	16	152	..	..	47	133	7	12126	15431
Total	7423	325	269	322	324	128	29	1630	1568	1956	566	290	16	325	16	141	339	1355	1381	439	445	135	908	309	1630	162	2143446	129244

C.—*Proportion of inundated land in the northern part of the District of Gorukhpoor, that is covered during the whole rainy season, that in ordinary years is occasionally covered, and that is exempt from being flooded, except in extraordinary years.*

Constantly under water or mere barren channels 325 square miles; Regularly inundated throughout the rainy season 1072; Liable only to occasional floods but every year covered for some days at least 571; Land which in some years is liable to be flooded for two or three days 501; Entirely exempt from inundation 6025.

D.—*Estimate of the proportion of different classes of society that are employed in agriculture in the northern part of the District of Gorukhpoor.*

Ashraf who do not farm 3625 families; Ashraf who have farms but do not work 34150; Ashraf who have farms, and work with their own hand, but do not plough 84063; Ashraf who hold the plough 3046; Traders (Bakalies) who have farms 1264; Traders (Bakalies) who have not farms 4762; Artificers (Pauniyas) who live entirely by their own profession 7843; Artificers (Pauniyas) who have farms, but do not work them by their own hand, a few; Artificers (Pauniyas) who occasionally cultivate land, either for themselves or for hire 21770; Grihasthas who plough their own farms 64109; Grihasthas who take service as ploughmen 52467; Total families 277099. Grihasthas who come from other districts to plough, individuals 54015.

E.—*An estimate of the manner in which the people of the northern part of the District of Gorukhpoor are fed.*

Families that eat meat daily 5; Families that eat meat from 2 to 10 times a month 12700; Families that sacrifice on great occasions only 156812; Families that cannot afford meat on any occasion or that reject its use 107582; Families that have as much fish as they please, average perhaps from 120 to 150 times a year 22210; Families that have fish daily in the cheap season alone, and in the dear season procure it only some times, perhaps in all from 30 to 90 days in the year 108777; Families that have only what fish they can catch themselves, or at least purchase on high occasions only in all from 30 to 60 days 38376; Families that reject fish 107736; Families that can use Ghiu whenever they please 53352; Families that use milk daily 43677; Families that use milk in the cheap season often, and in the dear season on high occasions, in all from 90 to 150 days 161953; Families that use milk on holidays alone in the dear season, and sometimes on other occasions when its cheap, in all from 30 to 45 days 71469; Families that seldom procure milk, few; Families that use sugar or sweet-meats when they please, usually from 60 to 120 days 8364; Families that use sugar or sweet-meats one or two times in the week, and in hot weather drink Sharawat 75167; Families that procure them on holidays alone 193568; Families that use daily pulse for curry 199830; Families that use pulse for curry during a part of the year only, especially in harvest 77269; Families that use pulse only on particular occasions few; Families that use cultivated vegetables daily 18030; Families that use cultivated vegetables, when they cannot procure pulse 128079; Families that use cultivated vegetables only on particular occasions 130990; Families that can afford to purchase foreign spices 145244; Families that procure oil in abundance 22105; Those that have a moderate allowance of oil 87664; Those that procure oil scantily 151890; Families that procure oil only occasionally or in very small quantities 15440; Families that have salt in abundance 21905; Families that procure a stinted allowance of salt 122623; Families that procure a scanty allowance of salt 125184; Families that procure salt in very small quantities 7387; Families which use rice two times daily, with wheaten cakes occasionally as a variety 67424; Families which use rice in harvest two times, in other seasons wheat or other coarse grains 192917; Families which once a day use boiled rice, and once wheaten cakes 3118

Families which use in general wheat, or other coarse grains, and procure rice on some occasions only 13640; Families which use two or three curries daily or frequently 18625; Families which use two or three curries five or six times a month 96647; Families which use only one curry a day, except on great occasions 161827.

F.—*An estimate of the extent to which the people of the northern part of the District of Gorukhpoor indulge in various intoxicating substances.*

Men who are addicted to palm wine 15964; Men who are addicted to distilled liquors 75943; Men who use opium 1163; Men who smoke Gangja 3030; Men who use Siddhi or bhang 14114; Men who use Charas, few; Men who smoke prepared tobacco in abundance 140309; Men who cannot smoke abundance of any kind of tobacco or who reject its use 136790; Women who smoke prepared tobacco, 95; Men who chew tobacco 211891; Women who chew tobacco 182493; Men who use snuff 8812; Men and women who have betle in abundance 73609; Men and women who are stinted in betle 102557; Men and women who seldom procure betle 100933.

G.—*An estimate of the manner in which the people of the northern part of the District of Gorukhpoor are supplied with fuel and light.*

Fire-wood 138343 families; Cowdung sometimes mixed with husks 138756; Mustard seed oil 170334; Linseed oil 96468; Oil of Sesamun 169; Castor oil or that of the Ricinus 843; Oil of Barra or seed of Kusam 1638; Karangja seed oil 950; Koranda oil expressed from the seed of the Bassia 6697; Families which burn a lamp all night 1567; Familes which burn a lamp to midnight 33243; Families which burn a lamp three hours 97081; Families which burn a lamp when they take supper 136578; Families which burn torches or straw at supper 8630.

H.—*An estimate explaining the extent of luxury in attendance and conveyance in the northern part of the District of Gorukhpoor.*

Number of tame elephants 37; Camels 30; Saresa or other large horses 522; Ponies of the kind called Tatoos 6293; Rath or four-wheeled carriages drawn by oxen 4; Two wheeled Carriages drawn by oxen (Bahalagari) 21; Two wheeled carriage drawn by horses 1; Palanquins called Khar Khariya 81; Palanquins called Tarhiya Palki 192; Palanquins called Meyana and Mahapa 1076; Male free domestic servants 4360; Female free domestic servants 740; Poor women who bring water to wealthy families 5660; Men slaves employed entirely as domestics 212; Men slaves partly employed in agriculture few; Men slaves employed entirely in agriculture 200.

I.—*State of education in the northern part of the District of Gorukhpoor.*

Men fit to act as writers born in the division 5244; Employed in the district 1817; Employed abroad 330; Not employed 3098; Strangers employed here as writers 233; Strangers waiting for employment few; Men belonging to the district employed in the regular army 298; Employed in the police or revenue as guards by merchants 2788; Employed abroad in the police or revenue 833; Not employed 14203; Strangers employed in the police and revenue or as guards by merchants 257; Strangers waiting for employment few.

K.—*List of the Hindu Academicians in the northern part of the District of Gorukhpoor.*

Gorukhpoor—Grammar, Poetry heroic, Law, and Astrology 15. Munsurgunj—Grammar and Law 23. Parraona—Do. do. Astrology 33. Kesiya—Do. do. 5. Belawa—Do. Legend 9. Selempoor Majhauli—Do. do. do. Astrology, Magic of the Tantras 36. Rhagulpoor—Poetry heroic, Grammar, Law, Legend, Astrology 26. Barahalgunj—Do. Law, Legend, Astrology 11. Gajpoor—Grammar, Poetry, Law, Metaphysics, Theology, Magic of the Tantras, Legend, Astrology, Medicine 153. Bhewopar—Grammar, Poetry heroic 5. Onaula—Do. Magic of the Tantras, Poetry heroic, Astrology 15. Gopalpoor—Grammar, Law, Legend, Astrology 85. Sanichara—Do. do. Legend, Astrology 9. Mahuyadabar—Grammar, Metaphysics, Theology, Law 20. Khamariya—Grammar, Astrology, Law, Legend 28. Lalgunj—Grammar 4. Dumuriyagunj—Grammar, Law, Legend, 28. Basti—Do. do. do. Metaphysics, Astrology 42. Magahar—Grammar, Law 24. Bakhira—Do. 2. Bangsi—Poetry heroic, Law, Grammar, Astrology 44. Nichlaul—Grammar, Law, Legend 5. Total 622.

L.—*Manner in which the occupied Lands in the northern part of the District of Gorukhpoor are employed.*

Number of houses 42100; Trees 1032780; Bamboos 6080; Kitchen gardens 3815; Vegetables in the fields 2240; Transplanted summer rice by itself 120200; Broadcast summer rice by itself 492330; Do. do. followed by Masur 56630; Do. do. followed by Mausar mixed with Linseed 29590; Do. do. followed by Pease 17585; Do. do. followed by Urid 7280; Do. do. followed by Urid mixed with Til 3550; Do. do. followed by Urid mixed with Anardana 1920; Do. do. followed by Urid mixed with Anardana and Til 450; Do. do. followed by But 103080; Do. do. followed by But mixed with Linseed 105670; Do. do. followed by But mixed with Sarso 1150; Do. do. followed by But mixed with Kesari 1460; Do. do. followed by China 3900; Do. do. followed by Barley 46910; Do. do. followed by Barley mixed with Pease 1000; Do. do. followed by Barley mixed with Sarso 37840; Do. do. followed by Barley mixed with Linseed 3850; Do. do. followed by Wheat 16560; Do. do. followed by Wheat mixed with Sarso 3440; Do. do. followed by Wheat mixed with Linseed 3190; Do. do. followed by Wheat mixed with Barley 27670; Do. do. followed by Wheat mixed with Barley and Sarso 1395; Do. do. followed by Sarso 1745; Do. do. followed by Linseed 25075; Do. do. mixed with Arahar 3490; Do. do. mixed with Arahar and Patuya 525; Do. do. mixed with Arahar and Jethuya Cotton 25; Do. winter rice by itself 190505; Do. do. followed by Khesari sown among the stubble 1125; Transplanted do. by itself 208510; Do. do. followed by Khesari sown among the stuble 60; Do. do. followed by Pease sown among the stuble 60; Spring do. 138; Tangun by itself 3010; Do. followed by Masur 1300; Do. followed by Masur mixed with Linseed 2100; Do. followed by Urid 2230; Do. followed by But 2520; Do. followed by Barley 5520; Do. followed by Barley mixed with Sarso 1500; Do. followed by Wheat 1400; Do. followed by Wheat mixed with Sarso 1350; Do. followed by Wheat mixed with Barley 670; Do. followed by Wheat mixed with Barley and Sarso 400; Do. followed by Lahi 230; Do. followed by Sarso 60; Do. followed by Linseed 1000; Do. mixed with Arahar 3350; Do. mixed with Arahar and Patuya 1250; Do. mixed with Maruya followed by Barley mixed with Sarso 30; Do. mixed with Maruya and Jethuya Cotton 80; Broadcast Maruya by itself 22520; Do. do. followed by Masur 2600; Do. do. followed by Masur mixed with Linseed 3700; Do. do. followed by Urid 2140; Do. do. followed by But 1970; Do. do. followed by But mixed with Linseed 1340; Do. do. followed by Barley 10020; Do. do. followed by Barley mixed with Sarso 660; Do. do. followed by Wheat 7130; Do. do. followed by Lahi 430; Do. do. followed by Linseed 200; Do. do. mixed with Tangun 100; Do. do. mixed with Arahar 55820; Do. do. mixed with Arahar and Patuya 43075; Do. do. mixed with Tangun and Arahar 1850; Do. do. mixed with Arahar and Jethuya cotton 3350; Do. do. mixed with Arahar, Jethuya cotton and Patuya 8300; Kodo by itself 49100; Do. followed by Masur 200; Do. followed by Masur mixed with Linseed 300; Do. followed by But 960; Do. followed by But mixed with Linseed 870; Do. followed

by Barley 480; Do. followed by Wheat 480; Do. mixed with Arahar 124380; Do. mixed Arahar and Patuya 107960; Do. mixed with Arahar and Jethuya Cotton 1085; Do. mixed with Arahar and Jethuya cotton and Patuya 40; Do. mixed with Jethuya cotton 25; Sawang by itself 27878; Do. followed by Masur 30; Do. followed by Masur mixed with Linseed 20; Do. followed by Pease 200; Do. followed by Urid 19460; Do. followed by Urid mixed with Anardana 3650; Do. followed by Urid mixed with Linseed 440; Do. followed by But 4300; Do. followed by But mixed with Linseed 1800; Do. followed by Barley 6760; Do. followed by Barley mixed with Sarso 2350; Do. followed by Wheat 2230; Do. followed by Wheat mixed with Sarso 1220; Do. followed by Wheat mixed with Barley 2380; Do. followed by Wheat mixed with Barley and Sarso 280; Do. followed by Linseed 10; Do. mixed with Arahar 8600; Do. mixed with Arahar and Patuya 1600; Do. mixed with Arahar and Jethuya cotton 25; Maize by itself 21772; Do. followed by Masur 1280; Do. followed by But; Do. followed by Barley 26690; Do. followed by Barley mixed with Sarso 5517; Do. followed by Wheat 105; Do. followed by Wheat mixed with Sarso 230; Do. followed by Wheat mixed with Barley 3405; Do. followed by Wheat mixed with Barley and Sarso 220; Do. followed by Carrots 10; Do. mixed with Tangun 850; Do. mixed Arahar 20920; Do. mixed with Arahar and Patuya 21000; Do. mixed with Arahar and Jethuya cotton 2725; Do. mixed with Arahar, Jethuya cotton and Patuya 420; Janera mixed with Kodo 10; Do. mixed with Arahar 90; China by itself 2600; Wheat by itself 281120; Do. mixed with Sarso 474280; Do. mixed with Linseed 22150; Do. mixed with Barley 115050; Do. mixed with Barley and Sarso 40810; Do by itself 135130; Do. mixed with Pease 36450; Do. mixed with But or Chana 4100; Do. mixed with Sarso 331640; Do. mixed with Linseed 33800; Masur by itself 62420; Do. mixed Barley 6200; Do. mixed with Linseed 72890; Pease (Suguya) sown in the mud without culture 6350; Do. do. by themselves 18900; Do. (Kavali) by themselves 830; Do. Suguya mixed with Sarso 32200; Urid by itself 212943; Do. mixed with Mothi 1595; Do. mixed Bora 2900; Do. mixed with Bhetmas 1040; Do. mixed Anardana 33930; Do. mixed with Anardana and Linseed 2000; Do. mixed with Linseed 22600; Do. mixed with Til 2800; Do. mixed with Til and Anardana 700; Do. mixed with Jethuya cotton 100; Kulthi by itself 1140; Mothi by itself 40095; Do. mixed with Bora 250; Mung by itself 4555; But by itself 153970; Do. mixed with Khesari 240; Do. mixed with Sarso 7990; Do. mixed with Linseed 210170; Bhetmas by itself 502; Lahi or Tori by itself 4465; Sarso by itself 4180; Rayi sown in the mud without culture 300; Linseed by itself 690; Til by itself 4815; Tobacco by itself 2289; Do. mixed with Murai or Radish 20; Betle leaf 222; Sugar cane (Reongra) 1520; Do. (Mango) 1400; Do. (Sarotiya) 3340; Do. (Baraukha) 400; Cotton Jethuya mixed with Urid 970; Do. Kukti by itself 1410; Do. Kukti followed by Masur 25; Do. do. followed by Barley 260; Do. do. followed by Linseed 260; Indigo by itself, 1st year 160, 2nd do. 150; Do. do. 1st year seed 60, 2nd do. plant 60; Do. mixed with Urid 300; Do. mixed with Chana 150; Safflower by itself 10; Carrots by themselves 546; Shuhkurkund 393; Suthni by itself 408; Onions 210; Garlic 142; Turmeric 2018; Ginger 105; Ajoyan sown in the mud without culture 160; Dhaniya by itself 37; Saongph by itself 50; Methi by itself 3; Kasni mixed with Murai or Radishes 11; Ricinus by itself 200; Seedling land followed by Tori or Lahi 384; Do. by itself 32872—Total 5713920.

M.—*General Abstract of the value and produce of lands occupied by farmers who cultivate with the plough in the northern part of the District of Gorukhpoor.*

Fruit trees, value of Mahuya trees in Rupees 163755; Vegetables, &c. in gardens and fields value in Rupees 58192. Grain—*Rice*—Quantity in Mans 7727072; Value in Rupees 3021055; Quantity remaining for consumption after deducting seed in mans 7048634; *Tangun, Maruya, Kodo, Sawang, Maize, Jenara China, Bhetmas and Anardana*—Quantity in Mans 1971443; Value in Rupees 786120; Quantity remaining for consumption after deducting seed in mans 1929876. *Wheat and Barley*—Quantity in Mans 7589847; Value in Rupees 4267024; Quantity remaining for consumption after deducting seed in mans 6651782. *Pulse*—Quantity in Mans 4758984; Value in Rupees 2531266; Quantity remaining for consumption after deducting seed in mans 4400456. *Sarso, Lahi, Rayi, Linseed, Til, Ricinus, and Safflower seed*—Quantity in Mans 515598; Value in Rupees 415156; Quantity

remaining for consumption after deducting seed in mans 480554. *Sugarcane*—Quantity in Mans 63535; Value in Rupees 72788. PLANTS FOR MAKING THREAD AND ROPE—*Patuya*—Quantity in Mans 25517; Value in Rupees 36663. *Cotton*—Quantity of Mans 11314; Value in Rupees 23000. PLANTS FOR SMOKING AND CHEWING. *Betle leaf*—Value in Rupees 33300. *Tobacco*—Quantity in Mans 14691; Value in Rupees 21003. PLANTS USED FOR DYING.—*Indigo, Plants*—Value in Rupees 4716. *Seed*—Quantity in Mans 36; Value in Rupees 98; Quantity remaining for consumption after deducting seed in Mans 33. *Safflower flower*—Quantity in Mans—; Value in Rupees 6. MEDICINE—*Kasni*—Quantity in Mans 16; Value in Rupees 46; Quantity remaining for consumption after deducting seed in mans 15.—Total number of each Thanah 11434195.

N.—*Estimate of the Live Stock in the northern part of the District of Gorukhpoor.*

Number of Cows belonging to the high castes 493488; Value 2008121 rupees. Do. belonging to tradesmen 200922; Value 797752. Do. belonging to farmers 272184; Value 1206337. Bulls reserved for breeding 11997. Consecrated bulls 2000. Bulls wrought in the plough, belonging almost entirely to the high castes 37290; Value 202910. Oxen used in wheel carriages emyloyed only for conveying passengers 14; Value 240. Do. used in carts employed for carrying goods 1699; Value 24860. Do. used for carrying back loads belonging to traders 9575; Value 131867. Do. used both in the plough and for carrying loads or to draw carts 23188; Value 161633. Do. used in machinery 2750; Value 16643. Do. used in the plough alone belonging to the high castes 386941; Value 2759800. Do. used in the plough alone belonging to tradesmen 59114; Value 438653. Do. used in the plough alone belonging to mere farmers 245499; Value 1819811. Buffaloes used for carrying back loads 470; Value 3915. Milch Buffaloes 19040; Value 230960. Goats grown females 15870; Value 5871. Sheep called Bhera breeding females 28425; Value 14673. Swine breeding females 46450; Value 34242. Asses 4820; Value 9721. Horses used for carrying loads 380; Value 1520. Total Number 1862116; Total Value 9869529 rupees.

O.—*Estimate of the quantity of milk procured by the owners of cattle in the northern part of the District of Gorukhpoor.*

Total Number of Cows 966594; Do. giving milk 483295; Total milk in *mans* 821015; Total value of milk in rupees 712889; Total number of Buffaloes 19040; Number giving milk 9520; Total milk in *mans* 68650; Total value of milk in rupees 69584; Total milk in *mans* 889665; Total value of milk in rupees 782473.

P.—*Estimate of the number and kinds of Artists in the northern part of the District of Gorukhpoor.*

Mirasins Kauwal 20; Dancing girls 95; Chamar Natuyas 25; Bhaktiya boy 5; Katthaks 49; Hela Bajaniyas 195; Nagaris 3; Daphalis 192; Pangwariyas 36; Hijras 45; Kirtaniyas and Bhajaniyas 98; Nat Bazigurs 12; Bhangrs 6; Chambas 2; Washermen 1980; Rufugurs or Shal-washermen 3; Sabangurs 7; Baris or torch and platter makers 506; Tailors 554; Khimahdoz or tent makers 2; Barbers 2264; Sinduriyas or red lead makers 9; Lakharas 50; Churiharas 363; Tiklisazs 1; Malis 256; Damras and Bangsphors, bamboo basket makers 395; Tarkiharas 26; Bindu or mat makers 181; Paper makers 4; Ink makers 4; Atushbaz 6; Chamars or shoe makers 1617; Saddle makers 62; Sabarwala Mochis 3; Dabgars 5; Naychahbunds 3; Tamaku furosh 64; Distillers 753; Shops for selling palm wine 40; Telis 2191; Ahirs 2703; Halwais 261; Bharbhujas 1533; Daldaras 50; Nanwais 12; Bukurkasabs 29; Bara kusabs 30; Comb makers 3; Kharadis 20; Kamangurs 8; Carpenters 1315; Sawyers 110; Blacksmiths and Carpenters 114; Blacksmiths 1281; Nalbunds 4; Sikulgurs 48; Tirgurs 11; Kundgurs or inlayers 3; Kaseras 68; Thateras 70; Tamberas 7; Bharatwals 5; Rangdhaluyas 24; Kalaigars 2; Sonars 795; Sondhoyas 4; Watchmakers 2; Kukkak 1; Kunghars or potters 1273; Kasgars 13; Thawais or Bricklayers 58; Dhuniyas or cotton beaters 1536; Rungrez or Dyers 79; Tatoya weavers 6; Jola weavers 3560;

Dhuniya weavers 81; Chamar weavers 1548; Kundigars 3; Chhipigars 32; Newarbafs 1; Blanket weavers 451; Patuyas 195; Kangjars or rope makers 12; Sugar boilers 17; Sorahpuzs or salt petre makers 231.

Q.—*Estimate of the Exports and Imports of the northern part of the District of Gorukhpoor.*

Rice in the husk, Exports Rupees 2957; Imports Rupees 2008. Do. cleaned without boiling, Export 315033; Import 172024. Do. cleaned by boiling, Export 45239; Import 6173. Wheat, Export 329446; Import 85159. Barley, Export 65876; Import 3256. Gujai, or Wheat and Barley mixed, Export 15358; Import 7500. Barley and Pease, Export 10628; Import 6262. Maize or Makai Export 14538; Import 2413. Maruya, Export 1600; Chana or but, Export 141171; Import 48722. Urid, Export 66161; Import 17910. Arahar, Export 36161; Import 10332; Matar, Export 7513; Import 6097. Kabli matar or pease, Import 100. Masur or letil, Export 3667; Import 4781. Mung, Export 516. Mothi or Bhringgi, Export 8943. Sarsong and Lahi or rape and mustard seed, Export 79122; Import 35533. Tisi or linseed, Export 25940; Import 12200. Til or seed of Sesamum, Export 175. Oil, Export 519. Sugar, Export 25550; Import 11003. Shukkun, Export 12475; Import 12195. Extract of Sugarcane, Export 11433; Import 17067, Treacle and Molasses, Import 1325. Tobacco leaf, Export 60; Import 8771. Prepared Tobacco, Import 1100. Turmeric, Export 1383; Import 2143. Dry Ginger, Export 2425; Import 7000. Betlenut, Import 5000. Betle leaf Export 150; Import 1500. Coconuts and Coconut shells, Import 625. Pasari goods, Import 17505. Paper, Import 23143. Honey, Export 50; Import 25. Wax, Export 5300; Import 6963. Catehu or Kath Export 16520; Imports 550. Sinduri Dye, Export 900. Indigo, Export 10920. Red Starch or Abir, Import 80. Lalmarich or Capsicum, Import 590, Resin called Karel or Dhuna, Export 204; Import 400. Lack, Export 100; Import 200. Drugs from the territories of Gorkha, Export 2219; Import 10383, Wild fruit and drugs, Export 5. Long pepper roots, Export 882; Import 60. Do. do. Export 465; Import 216. Cotton wool, Import 212450. Cotton thread, Import 200. Cotton cloth, Export 27100; Import 87725. Chintz and coloured cloth, Exports 10800; Imports 28350. Cloth of Tasar and cotton thread mixed, Export 700; Import 20425. Cloth of silk and thread mixed, Export 1300; Import 17050, Silk cloth, Import 2000. Shal, Tus, and Loi, Import 2300. Broad cloth and Purpet, Import 700. Blankets Import 440. Woollen carpets, Import 1000. Cotton carpets, Import 500. Bhangra sack cloth, Import 1000. Patuya sack cloth, Export 25; Import 410. Manihari goods, Import 1770. Essences, Import 500. Mauhuya flowers, Export 21330; Import 4615. Sakhuya timber, Export 605500. Small timber of sorts, Export, 3050; Import 2250. Sisau timber, Export 200. Fire wood, Export 8375; Import 4000. Charcoal, Export 300; Import 275. Boats, Export 2500. Muj, Export 67. Elephants, Export 8250; Import 8250. Cows and oxen, Export 140750. Buffaloes, Export 2060. Ghiu, Export 33390; Import 4480. Goats, Export 1350. Fish, Export 267. Salt, Export 4343; Import 185661. Nitre, Export 4000. Copper and copper vessels, Import 18650. Copper coin, Import 45000. Vessels of brass and bell metal, Export 5935; Import 30960. Iron, Export 250; Import 53463. Iron vessels, Import 100. Tin, Import 3902. Lead, Import 2120. Zinc, Import 2609. Ornaments made of the base metals 970. *Total Exports* Rupees 2143446; *Total Imports* Rupees 1292440.

R.—MARKET TOWNS IN GORUKHPOOR.

Division I. Gorakhpoor.

II. *Munsurgunj.*—MARKET PLACES.—Munsurgunj. Haptangunj. Piparaich. Bargadaiya. Bhathat. Pangcharukhi. Nibuiya. Khanpoor. Badowar. Pratawal. Ranggughat.

III. *Parraona.*—Parraona. Chhauni. Sivapoor. Sangkopar. Damurbhar. Bahadurgunj. Mahai. Amnoya. Ramkola. Deworiya. Khutahi. Alammethiya. Khejuri. Ekdangga. Lakhuya. Lemuya. Bankungriya. Bangai. Simra.

Lakshmipoor. Bangsgang. Gaglawa. Gauri. Briyot. Sisaya. Parsona. Bahadurpoor. Sumahi. Tamkubi or Bharpati. Dogbara. Turakpati. Bardaha. Balambha. Bangjariya.

IV. *Kesiya.*—Kesiya. Nadoya. Mauhuya.

V. *Belawa.*—Belawa. Sirasi. Ramnagar. Hetampoor. Hata. Dhamaul.

VI. *Majholi.*—Selempoor. Majholi. Sohanpoor. Bhinggari. Hatoya. Dhusari or Dhusoya. Barkagang. Kaparwar. Kangyopar. Bharauli or Bharali. Sareya. Bakhari. Bhataliya. Karaudi. Belawon. Pipra.

VII. *Bhagulpoor.*—Bhagulpoor, Pingri. Lar. Dighara. Palika. Payana. Gangrer. Rajpoor.

VIII. *Barahalgunj.*—Barahalgunj.

IX. *Gajpoor.*—Gajpoor. Kauriram. Rudrapoor. Madanpoor. Indupoor. Sauna. Murera.

X. *Bhewopar.*—Bhewopar. Saraiya. Bhiti. Benipar.

XI. *Onaula.*—Onaula.

XII. *Gopalpoor.*—Gopalpoor. Lalgunj. Sahebgunj. Bargong. Hata. Janipoor. Sikrigunj. Dhuriyapoor. Sahapoor. Karekangdhu. Barahapoor.

XIII. *Sanichara.*—Sanichara. Tengra. Mathalispoor. Hariharpoor. Mahasong. Gaighat. Mollapoor. Lalgunj.

XIV. *Mahuyadabar.*—Mahuyadabar. Pipara. Nagar. Ganespoor. Captaingunj. Avadhutnagar. Uji.

XV. *Khamariya.*—Khamariya. Amorha. Amanigunj. Amari. Sekundrapoor. Hyderabad. Maharajgunj.

XVI. *Vazirgunj.*—Vazirgunj. Shahgunj. Namti.

XVII. *Nawabgunj.*—Nawabgunj.

XVIII. *Manikapoor.* Manikapoor. Bidyanagar. Maharajgunj. Bhetuwara.

XIX. *Lalgunj.* Lalgunj. Dhadhuya. Payer.

XX. *Dumuriyagunj.*—Dumuriyagunj. Nezamabad. Bhanpoor.

XXI. *Basti.*—Munsurnagar or Basti. Pakoliya.

XXII. *Magahar.*—Magahar. Bhagra. Baruipar. Mihidawal. Rudhauli. Hanumangunj.

XXIII. *Bakhira.*—Bakhira.

XXIV. *Bangsi.*—Bangsi. Khejuri. Belawa.

XXV. *Dhuliyabhandar.*—No market place.

XXIV. *Lotan.*—Kharati. Lotan. Manggalpoor.

XXVII. *Pali.*—Pali.

XXVII. *Nichlaul.*—Nichlaul. Hanumangunj. Maharajgunj. Mithara. Ratangar. Kutibhar. Balaikhor.

BOOK III.—DINAJPOOR.

A.—Containing the produce of 10 specimens of rough Rice, each measuring 1728 cubical inches, when carefully dried and cleaned by boiling.

Description of the Rice.	Cubical inches of clean rice.	Weight in ounces Avoirdupois.					
		Total of rough rice.	Total of clean rice.	Broken pieces of rice.	Bran.	Husks.	Total of the 4 last columns.
No. 1. Old winter Rice of 2nd quality .	918	568½	410½	17½	41	107	576
2. do. do. . .	963	567	428	3	20½	118	570
3. do. do. . .	909	563	414	17	21	126	574
4. New do. do. . .	1008	570½	449	..	24½	121	594½
5. do. do. do. . .	972	570½	435	..	23	119	577
6. do. do. do. . .	945	579	427	..	26½	117½	571
7. New summer rice	967½	593	447½	..	20½	109	577
8. do. do.	967½	585	444	..	32	112½	588½
9. do. do.	931½	575	426½	..	25½	121	573
10. do. do.	981	586	444½	..	29½	115	589
Average . .	956.25	575.75	432.6	12.5	26.4	116.6	579

B.—GENERAL STATISTICAL TABLE OF THE DISTRICT OF DINAJPOOR.

Numbers.	Division or Thanah.	Extent in square miles.	Soil.					Manner of occupation.									Mauzas.	Market places.	Higher Hindu schools.	Common Hindu School.	Persian schools.	Proportion between the number of		Value of Exports.	Value of Imports.
								Waste.				Clear land not let on lease but occasionally cultivated.		Lands let on lease.											
			Rivers, tanks, marshes and water courses.	Inundated in the rainy season.	Red clay.	Light coloured clay.	Free soil.	Rivers, &c.	Inundated.	Woods and bushes.	Steep barren places, roads, and burial grounds.	Inundated.	Not Inundated.	Stiff clay.	Free soil.							Hindus.	Moslems.		
1	Rajarampoor	340	63	20	..	154	103	63	10	15	10	10	20	127	85	851	29	4	..	..	8	8	325500	110250
2	Birgunj	340	32	12	..	116	180	32	6	12	10	6	44	76	154	477	35	..	2	..	4	12	85300	29300
3	Thakurgram	400	25	5	..	..	370	25	5	..	20	..	50	..	300	268	20	..	1	..	4	12	28450	11800
4	Ranisongkol	210	10	..	..	..	200	10	..	..	16	..	26	..	158	213	16	..	..	..	1	15	15630	8100
5	Pirgunj	220	13	7	..	..	200	13	7	14	20	..	28	..	138	373	11	..	..	..	4	12	7030	8200
6	Hemtabad	300	17	20	..	..	263	17	20	..	38	..	38	..	187	355	16	..	..	1	9	7	627620	128200
7	Kaliyagunj	310	15	40	..	95	160	15	15	10	10	25	20	85	130	566	19	2	2	..	8	8	40830	7400
8	Bongsihari	240	10	5	..	225	..	10	5	..	15	..	30	180	..	853	16	..	..	..	4	12	138100	9200
9	Jogodol	250	15	62	..	173	..	15	50	22	19	12	22	110	..	628	11	..	2	..	8	8	185700	21050
10	Maldeh	280	17	70	..	153	40	17	50	35	18	20	35	90	15	341	11	1	10	2	10	6	678100	107850
11	Purusa	260	12	24	..	224	..	12	18	10	16	6	8	190	..	577	10	..	..	..	2	14	116700	24250
12	Gonggarampoor	320	20	30	..	240	30	20	22	2	12	8	16	220	20	615	16	1	10	..	6	10	176900	74800
13	Potiram	280	18	17	..	185	60	18	7	..	35	10	17	158	35	983	19	3	40	3	12	4	472290	85800
14	Potnitola	240	15	..	..	195	30	15	..	5	10	..	8	182	20	843	20	..	..	..	4	12	222300	41050
15	Badolgachhi	270	17	13	..	130	110	17	7	8	18	6	60	100	54	922	16	..	..	..	6	10	146720	51250
16	Lalbazar	280	12	12	..	92	164	12	8	34	12	4	18	70	122	1055	25	4	12	2	6	10	293100	53100
17	Chintamon	200	12	6	..	108	74	12	5	15	8	1	34	75	50	568	25	..	..	..	6	10	233320	136500
18	Hawra	180	10	20	..	90	60	10	14	11	4	6	22	68	45	234	20	..	12	..	4	12	247560	28850
19	Nawabgunj	150	6	10	20	62	52	6	6	16	6	4	18	47	47	417	10	..	12	..	6	10	278180	84650
20	Ghoraghat	140	5	4	18	71	42	5	2	12	4	2	10	70	35	619	11	1	10	1	4	12	256400	63800
21	Khyetlal	160	8	4	..	128	20	8	4	..	3	..	5	122	18	383	4	..	..	..	4	12	8100	..
22	Dinajpur	4	1	..	..	..	3	1	..	1	1	..	..	..	2	16	5	..	6	..	6	10	235530	200500
	Total	5374	353	381	38	2441	2161	353	261	221	305	120	529	1970	1615	12162	365	16	119	9	3	7	4819360	1285900

C.—*Estimate of the population of Dinajpoor and of the numbers contained in each class of its inhabitants.*

Total 3000000—2100000 Muhammedans; 900000 Hindus. 10000 Brahmans; 890000 Sudras. 440000 Proper Bengalese. 70000 Pure Tribes (Suddhojati); 370000 Impure Tribes (Osuddhojati). 150000 Vile (Nich); 220000 Abominable (Ontyoj). 450000 Tribes not included among the Bengalese by Bollalsen. 15000 Tribes of Hindustan, about 3000 pure, among these are the Siks and Oshoyals; 435000 Tribes of Eastern India, all impure.

D.—*Estimate of the manner in which the occupied lands of Dinajpoor are employed, and of the value of the produce at the harvest season.*

Manner of occupation:—Cultivated for grain of various kinds, extent in Bigahs 6409000; Value in Rupees 17000000. Occupied by houses and gardens, viz. 500000 Bigahs. Houses 130000; Plantations chiefly of Mangos and Bamboos 140000, Value in Rupees 950000; Kitchen gardens 180000. Vegetables for the kitchen cultivated in the fields 150000 Bigahs; 1000000 Rupees. Plants for thread or ropes 80000 Bigahs; 245000 Rupees. Plants yeilding a sacharine juice (inspissated) 25000 Bighas; 450000 Rupees. Plants for smoking or chewing 16000 Bigahs; 187500 Rupees. Plants used for dying chiefly Indigo weed 15000 Bigahs; 37500 Rupees. Plants for feeding Silk worms (leaves) 8000 Bigahs; 90000 Rupees. Total, exclusive of milk, about 1434350; 7194000 Bigahs; 19960000 Rupees.

E.—*Estimate of the extent and value of the various crops of grain cultivated in the district of Dinajpoor.*

Extent in Bigahs 4266000 Winter rice at 2 9-16ths Rs. Value 10931625 Rupees. 640000 Bigahs Winter rice and summer rice at 2 13-16ths Rs. Value 1800000. 256000 Bigahs Winter rice 3 R. Pulse ¾ R. Value 960000. 144000 Bigahs Summer rice 2 R. Pulse ¾ R. Value 396000. 576000 Bigahs Summer rice 2 R. Oil-seeds 2 R. Value 2304000. 72000 Bigahs Summer rice 2 R. wheat or barley 1¾ R. Value 270000. 38000 Bigahs Summer rice alone 2 R. Value 76000. 13000 Bigahs Spring rice at 1½ R. Value 19500. 64000 Bigahs Oil-seeds alone at 2 R. Value 128000. 38000 Bigahs Oil-seeds 1 R. wheat or barley ½ R. Pulse ¾ R. 85500. 78000 Bigahs Pulse alone 78000. 215000 Bigahs Seedling rice in stiff soils producing else. Total Bigahs 6400000. Average R. 2¾. Total value 17048625 Rupees.

F.—*Exports and Imports from the District of Dinajpoor.*

Rice at 55 sers of 80 s.w. for the rupee, Export 3179000. Chira at 48 sers, 80 s.w. for the rupee, Export 80000. Mustard seed, Import 15000. Mustard seed oil at 4 R. for 40 sers of 80 s.w. Export 14200. Ghi, Export 40500. Bettle nut, Import 45500. Coconut, Import 2600. Tobacco at 1¼ R. for 40 sers, 80 s.w. Export 4070. Gangja or Hempbads, Export 12000. Dry ginger at 2 R. 40 sers, 80 s.w. Export 81400. Goods sold by Jhal Walehs chiefly Turmeric at 1¼ R. for 40 sers 80 s.w. Export 4700. Goods sold by Posari or druggist, Import 61400; Export 21000. Wax at 40 R. for 40 sers of 80 s.w. Import 6500; Export 6800. Bengal salt at 5 R. for 40 sers of 80 s.w. Import 690000. Coast salt at 3¾ R. for 40 sers of 80 s.w. Import 135000. Quick silver at 15 R. a ser of 80 s.w. Import 100. Tin at 32 R. for 40 sers of 80 s.w. Import 9200. Lead 12 R. for 40 sers of 80 s.w. Import 1500. Zinc at 26 R. for 40 sers 80 s.w. Import 7000. Iron, country from 4 to 7 R. for 40 sers 80 s.w. Import 29800. Steel 20 R. per 40 sers 80 s.w. Import 2200. Copper at 55 R. for 40 sers 80 s.w. Import 18900. Brass and copper vessels, Import 20000; Export 600. Goods sold by Monihari, Import 7500. Shells, Import 16000. Stone cups and plates, Import 1200. Sal and Sisu timber, Import 3000. Bamboos and bamboo mats, Export 5200. Sack cloth and bags of the same, Import 51000; Export 124600. Pat or Corchorus capsularis fibres

and twine at 14 anas for 40 sers 80 s.w. Export 12400. Son or fibres of the Crotolaria juncea 30 sers 80 s.w. for the rupee, Export 1240. Cotton wool chiefly from the west of India at 15 or 17 R. for 40 sers 80 s.w. Import 105500; Export 4000. Raw silk at 266 R. for 40 sers 80 s.w. Export 62600. Cotton cloths, Import 39000; Export 145000. Chints, Import 3000. Silk or silk and cotton cloths, Export 350000. Shawls, Import 1000. English woollen cloths, Import 10000. Patna and Bootan blankets, Import 1500. Woollen and cotton carpets, Indian, Import 2500. Gur or extract of Sugar cane at 1¼ R. for 40 sers. 80 s.w. Export 35500. Sugar at 6 R. for 40 sers of 72 s.w. Export 300000. Moth and Kotra or Molasses and Treacle at 1 R. for 40 sers 80 s.w. Export 72000. Indigo at 140 R. per *man* of 74 lb. 10 oz. Export 262500.—Total Imports 1285900; Total Exports 4819360.

ESTIMATE OF THE EXPENCE OF A HINDU FAMILY OF HIGH RANK AND STATION IN THE TOWN OF DINAJPOOR. IT CONSISTS OF THE MASTER, WHO IS MARRIED AND HAS ONE CHILD, OF A DEPENDENT RELATION WHO IS ALSO MARRIED, OF ANOTHER MALE DEPENDENT RELATION WHO ACTS AS STEWARD, BUT HIS WIFE DOES NOT LIVE IN THE FAMILY, OF A WIDOW WHO ACTS AS COOK, OF TWO MEN SERVANTS, AND A BOY OR WOMAN DOMESTIC, IN ALL TEN PERSONS.

Lodging.—To a small house built of brick 14 cubits by 7, usually divided into two apartments, with wooden doors and some small windows having wooden shutters. In this the master with his wife and child sleep and eat, 300 rupees. To a hut 8 cubits by 6 made of bamboo posts and beams, the walls of clay or of hurdles, the door a hurdle, 10 rupees. In this the male relation and his wife sleep. To another hut of the same kind 10 cubits by 7, which serves as a kitchen, and where the widow sleeps, if made of hurdles it is plastered with clay, 15 rupees. To a hut like the last, which serves for a store-house, and in which the boy or woman servant usually sleeps, 15 rupees. To 3 huts of the same kind but small, and their front only plastered, one serves for a temple the other two for accommodating strangers whether friends or religious mendicants, 25 rupees To a hut 12 cubits by 8 placed near the gate for receiving company (Baitokkhana); it is usually made with a wooden door, with walls of mats in which there are some openings by way of windows that may be shut by hurdles which fall down (Jhangh). In this the steward and servants usually sleep, 30 rupees. To a hut for the cattle 8 cubits by 6. This is not plastered, 10 rupees. To a house 10 cubits by 7 for the watchman, and through which is the entrance, with a mud wall which surrounds the premises, and which includes about 1¼ bigah (⅜ acre) planted with trees and flowers 35 rupees. Total 440 rupees. Interest insurance and repairs on the amount at 36 per cent. a year, 158 rupees; Ground rent, 6. Total lodging in expensive families, 164 rupees.

Very few people however occupy such a house. In place of a brick apartment for the master and mistress the usual accommodation is thatched but the beams and posts are wooden, and the walls are plastered with mud. Many houses of this kind have two stories but such are seldom inhabited by decent persons and are chiefly appropriated to prostitutes. A house of this kind costs 60 rupees which reduces the whole amount to 200 rupees; Interest, &c. on the amount 72 rs.; Ground rent, 6 rs.; Total usual lodging 78 rs.

Furniture.—Of a durable nature for the temple. 1 pair of copper cups for pouring water on the gods (Koshakoshi) 3 rupees. 1 copper kundo, another kind of cup used in prayer 2. 1 copper tat, a kind of plate used in prayer 1. 1 copper Puhspopatro, a plate used for holding the flowers used in prayer 3. 1 brass Podmason or salver 2. 1 brass Tripodi or tripod, which supports a shell or saucer (Panisongkho) containing holy water 6. 1 brass lamp with five lights (Pongchoprodip) 1. 1 bell-metal Kangsor, or bell in form of a plate 2. 1 bell-metal Ghonta, or common bell 2. 2 brass pots (Opkhora) for holding the water that is to be offered 2. 2 brass plates (Rikabi) for holding fruit and sweetmeats as offerings 3. 1 conch shell for blowing to attract the deities notice 3. 1 Chotudola, or wooden table, or altar on which the images are placed 4. 1 Chondonpata, or store for rubbing sandal wood to dust. 1 Ason or small woollen carpet, on which the person who prays sits. 8 as. Total of furniture for the Temple 36 rupees.

For the House.—Pots of various kinds for holding water, viz.: 4 brass Kolos 24 rupees. 3 do. Garu 8. 3 do. Lota 5. 3 bell-metal Opkhora 5. 3 brass Omriti 3. 6 brass and 4 bell-metal Thal or plates 20. 6 brass and 4 bell-metal Bati or large cups 10. 5 brass and 5 bell metal Kotoras or small cups 5. 2 brass Bohuguna or pots for boiling rice 4. 2 brass Hangri pots for making curry 4. 1 brass Hata or ladle and Bayuli, or hook for removing pots from the fire 2. 1 brass spitting pot (Dabor) 2. 3 brass lamp stand (Pilsoj) 5. One brass mortar and pestle 6. Two pair of betal salvers (Panbatta) one of brass, and the other of bell metal 8. 2 pair of betel nut cutters 8 anas. 1 brass implement for smoking tobacco through water (Hungka) 8 rupees. 1 Albala another instrument for the same purpose with long flexible tube, such as is used by Europeans in India. It is made partly of copper and partly of other metals 21. 2 iron (Khuli) frying pots used also for boiling milk 4. 2 hoes and 2 hatchets (Kural) 3. 1 Khonta, or wooden stake pointed with iron, used as a spade and pick axe 4 anas. 3 Bothis or kitchen knives 12. 3 Sickles (Kastya) for cutting grass for the cattle 6. 1 iron rod for cleaning the Hungka 1. 2 knives 8. 2 scissors 4. 2 Bills for cutting bamboos or wood 6. 1 iron ladle and an iron hook for removing pots from the fire 8. 1 brass or iron pot for holding oil and a handle of the same for a torch 3 rupees. 1 hanging irōn lamp 4 anas. 10 stone plates and 5 stone cups 13 rupees. 1 stone for grinding curry stuff 1. A palanquin (yan or jan) 20. 1 Toktoposh, a kind of large sofa made entirely of wood, and more perhaps resembling the bench in a guard room, where people can sit and sleep. It stands in the place where company is received 4. 2 bedsteads for the master and mistress, married people do not sleep in the same bed, 12. 3 chairs 3. 4 stools made of rattans (Mora) 2. 2 large chests 10. 2 small chests 4. 2 bamboo baskets covered with leather and having lids (Petara) 12 anas. 1 instrument for beating rice (Dheki) and a wooden mortar 1 rupee. 4 wooden stools for sitting on when they bathe (Jolchauki) 2. 10 low wooden stools for sitting on when they eat (Piri) 4. 2 pair wooden slippers (Khoroms) 8 anas. 10 wooden platters (Barkosh) 5 rupees. 2 plates for making cakes 1 ana. A large fan 2 rupees.—Total durable household furniture 238 rs. 2 as. Total durable furniture 274 rs. 10 as. Interest and repairs, &c. on the above at 24 per cent, 65 rs. 14 as.

Household furniture for a more perishable nature.—For the floor or for sitting on: 3 Sutrunjis or carpets made of cotton, or 3 Galichas or carpets made of woollen, both kinds are of the usual fabric and are long and narrow 20 rupees. 2 Dulicha or woollen carpets with the nap thrown on one side 12. 2 Sujni or square pieces of cotton cloth flowered with silk cotton thread, on which the master of the family sits 4. 2 large calico sheets; which cover the floor of the sitting apartment 6. 1 large pillow and two smaller for leaning the back against, while sitting on the floor as usual 4.

For sleeping in—5 sets of curtains of muslin for the master, mistress, male relation and wife, with one spare. The two latter persons sleep on the ground; but the curtains are hung from the roof of their hut, and are tucked under their bedding to keep off Muskitos snakes and other vermin 24. 5 mattresses of cotton 16. 4 blankets from Bootan or Patna 8. 6 quilts 24. 5 sheets for the beds of the master and mistress 7. 8 sleeping pillows of simul cotton, no changeable covers 8. 3 fine mats (made of the leaves of the (Thalia Patda B. Mss) Sitalpati on which the principal persons sleep in hot weather 3. 2 pair of painted mats for the same purpose 3. 4 coarse mats of leaves or stems of plants (Scripi) for the widow, servants or strangers to sleep on 3. 5 fine sack cloth coverings (Megili) for the same persons 2.—Total of more perishable furniture 144. Interest of money, repairs, and replacing the above at 36 per cent. per annum 51 rupees 13 anas. Umbrellas 1. Total annual expence of furniture 118 rupees 12 anas.

Ornaments.—For the mistress of the family: A gold ring for the nose (Noth) 16 rupees. A gold necklace consisting of eight sided beads (Dana), small round beads (Mala) and large beads of the same forms (Motormala) 96. A golden ornament called Changkoli which hangs from the neck lace 32. A kind of gold ear rings called Gengtha 24. Another kind called Dhengri 32. Another kind called Jhumka 12. Another kind called Pipolpata 8. A golden ornament for the forehead called Siti 32. A golden ornament hung to the neck called Maduli 16. A gold ring (Angguri) for the finger 8. A gold ring (Loha) for the left wrist 32. Silver bracelets or rings for the fore arms several on each, called Bayuti 50. A pair of

silver ornaments tied round the arm above the elbow (Tar) 30. A pair of silver bracelets made of beads (Paingchha) 8. A pair of silver ornaments tied round the middle of the arm (Tabij), men wear a charm in this kind of ornaments, the women are not guilty of this folly 8. 8 rings of silver for the toes, Chutki or Pasuli 8. A pair of silver oarnaments for the ankles, Bangkamol 25. Another silver ornament for the arm Rosuna 8. Another called Hatmaduli 10. A ring or bracelet of shell, which is worn by the Hindu women of rank because it is reckoned lucky 2 anas. Looking glass, comb, boxes for red lead and other things for the toilet kept in a small basket called Sindurchupri 8.—Total ornaments for the mistress of the family 455 rupees 10 anas.

For the master of the family—2 gold rings for the fingers 16. 2 or 3 gold ornaments (Maduli) hung round the neck 16. 1 Tabij or square ornaments which contains a charm and is tied round the arm 18. 1 looking glass 1 rupee 8 anas.—Total 51 rupees 8 anas.

For the child—1 pair gold rings or bracelets for the wrists (Bala) 30 rupees. An ornament of gold to hang round the neck (Podok) 32. A gold ring for the neck (Hangsuli) 32. A necklace of gold beads (Dana and Mala) 48. A pair of silver rings for the ancles (Mol) 16. A square ornament (Tabij) for containing a charm to be tied round the arm 6. Coral beads 4.—Total 168 rs.

The widow and dependent relation are allowed no ornament.—Total of ornaments 675 rupees 2 anas. Interest and new fashioning the above at 24 per cent. 162 rupees.

Clothing.—For the master of the family: His dress of ceremony adopted from the Muhammedans. 2 under coats or vests, Nima of white cotton cloth 12 rupees. 2 upper coats, Jama of the same 24. 2 turbans 10. 2 Girdles Potko 8. 2 pair drawers, Izar 4. 2 handkerchiefs 2. A pair of shawls 100, last 10 years. 2 pair slippers 2. His proper dress.—2 pair of cotton sheets, 5 cubits by 3, which he wraps round his shoulders and which are called Uronis 8. 3 pair of cotton wrappers for the loins (Dhuts) 8 cubits by 2, 8. 4 Angrakha and Taj or jackets and caps of cotton cloth, a part of dress adopted from the Muhammedans, but now in general use among men of rank, Pandits excepted, 6. 4 Phetas or turbans of white muslin 6. 3 Dolayi or double cotton sheets, quilted together without stuffing, for the cold season, 5 cubits by 3, 12. 2 Packhuri or Gelap, or double sheet not stitched together, used also in the cold season, 10 cubits by 3, 2. 1 piece of silk used at prayer. It is long enough both to serve for a wrapper round the loins, and to cover the shoulders and is called Jor or Dhuti Dobja 5. 2 Jor of fine cloth for receiving Hindu company 4. 1 piece of European broad cloth for the cold season, 5 cubits by 3, costs 10 rupees lasts 6 years 3.—Total 126 rupees.

For the mistress of the family—A silk cloth, 10 cubics by 2, which is called Sari, and after having been wrapped round the loins is passed over the head and shoulders 8 rupees. 6 cotton Saris with red borders 10. A Chador or cotton sheet for the cold weather 2. 2 Gamochhas or towels for bathing 8.—Total 20 rupees 8 anas.

For the child—Common dress 10 rupees. Visiting dress 10.—Total 20 rupees.

For the two male relations—10 Dhutis 6 rupees. 2 Jor for ceremony 4. 2 Uroni or Chador 5. 2 Turbans 2. 4 Gelap or sheets to throw round the shoulders in cold weather 10 cubits by 3, 8.—Total for two persons 25 rupees.

For the female relation—6 Saris of cotton cloth with red borders 7 rupees 8 anas. 1 Gelap or sheet for cold weather 1. 1 pair shell bracelets 3.—Total 11 rupees 8 anas.

For the widow—6 plain coarse wrappers (Bhuni) of cotton cloth 6 rupees. 1 Gelap 1.—Total 7. Total clothing 210 rupees.

Table.—Monthly expence: Rice, 4 *mans* fine old rice at 1¼ rupees. 2 *mans* coarse at 1 rupee, part is given away in charity 7. Pulse chiefly Oror (Cytisus Cajan) and Hari mug 1 *man* 1 rupee 8 anas. Wheaten flour 20 sers 1. Clarified butter 6 sers, 2 rupees 8 anas. Mustard seed oil 16 sers 2. Spice and other seasoning such as Turmerick, Capsicum, &c. 1 rupee 8 anas. Sugar and sweetmeats 2. Milk, 10 cows prime cost 40 rupees, interest on which at 1 per cent. 6 rupees 5 anas. Food 3. Vegetables 1 rupee 8 anas. Fish used daily 1 rupee 8 anas.

Tobacco 1 rupee. Betel 1. Fuel and earthen pots 2.—Total per mensem 27 rupees 14 anas. Total for the year 334 rupees 13 anas.

Servants and Equipage.—3 domestic's wages and clothes monthly 3 rupees 12 anas. 1 watchman 3. Barber 4 as. Washerman 12. Sweeper 4. Palanquin bearers employed occasionally 12 rupees. Horse, first cost 30 rupees, interest and supplying a new one occasionally at 3 per cent. 14 rupees 5 anas. Servant and food 3.—Total servants and equipage per mensem 23 rs. 14 as. 5 ps. Total annually 216 rs. 13 as.

Celebration of holidays, Guru Purohit and other expences connected with religion, of which the Durga Puja alone consumes at least 200 rs.; one man spent this year 10000 rs. 300 rs. Stationary and master to teach the child to read and write 6.—Total 592 rs.

H.—ESTIMATE OF THE EXPENCE OF A FAMILY OF SOME CONSIDERATION CONSISTING OF A MAN, HIS WIFE AND TWO CHILDREN, A WIDOW WHO ACTS AS COOK, A DEPENDENT RELATION WHO IS A KIND OF STEWARD, AND OF TWO DOMESTICS, A MAN AND BOY.

Lodging.—A house for the master and mistress 15 cubits by 8 with beams and posts of wood, walls clay or plastered with clay, a wooden door 40 rupees. A hut for the kitchen and where the widow sleeps 10 cubits by 6, with bamboo supports, walls of clay, or of hurdle plastered near the fire place with clay 15. A store house of the same kind where the boy sleeps 15. A hut for the cattle 8 cubits by 6, 8. A small hut for a temple 8 cubits by 6, 8. Another for strangers 10 cubits by 6, 10. A hut for receiving company and where the steward and servant sleep 30. A house for the watchman, through which the entrance is, with a high bamboo railing round the premises 24.—Total lodging 150 rs. Interest, insurance and repairs at 36 per cent. per mensem 54. Groundrent 1 bigah, ⅓ acre of land 2.—Total lodging 56 rupees.

Furniture.—For the temple—1 pair copper cups, Khoshakoshi 2 rs. 8 as. 1 copper cup called Kundo 1. 1 copper plate called Tat 1. 1 brass salver, Podmason 1. 1 brass Tripod or Tripodi with its shell 3. 1 brass pot, Opkhora 1. 1 brass plate called Rikabi 1. 1 conch shell 2. 1 stone for grinding sandal wood 8 as. 1 Kusason or mat of grass on which the master prays 1. 1 bell metal plate for ringing (Kangsor to call the attention of God) 1 r. 8 as. 1 brass lamp with five lights 1. 1 wooden throne (Singhason) for the gods, covered with cloth 2 rs. 8 as.—Total 18 rs. 1 as.

Household furniture of lasting materials—Pots or vessels of different kinds for holding water, viz. 2 Kolos of brass 10 rs. 1 Garu do. 3. 4 Lota do. 5. 2 Omriti do. 2 rs. 8 as. 2 Opkhora of bell metal 3. 2 Betle salvers of brass, Panbata 4. 2 pair betel nut cutters 8 as. 4 brass or bell metal plates, Thal 12 rs. 6 brass or bell metal cups, Bati 6. 2 brass lamp stands, Pilsoj 3. 2 brass pots for boiling rice, Bohuguna 3 rs. 8 as. 1 iron pot (Khuli) for boiling milk and frying 1 rs. 8 as. 1 iron ladle and hook for removing pots from the fire, Hata and Bayuli 8 as. 1 iron rod for cleaning the Hungka 1 as. 1 hoe and 1 hatchet 1 r. 8 as. 1 bill for cutting and cleaving bamboos 3 as. 2 sickles 8. 2 kitchen knives (Bothi) 8. 2 knives 8. 1 pair scissors 2. 1 stake pointed with iron, Khonta 2. 3 plates and two cups of stone 4 rupees. 1 stone for rubbing curry stuff 12 anas. 2 bedsteads for the master and mistress of the family 4 rupees. 1 large and one small chest 8. 1 bamboo trunk Petara 8 anas. 1 wooden stool 12 as. 6 low wooden stools for sitting on at meals 2 rs. 4 as. 1 instrument (Dhengki) for beating rice, and a wooden mortar 1 r. 4 stools of rattan (Mora) 1 r. 2 wooden plates for making cakes 1 a. 2 pair of wooden shoes 6 as.—Total 80 rs. 11 as. Total durable furniture 98 rs. 12 as. Interest and repairs on the above at 24 per cent. 23 rs. 11 as. 2½ ps.

Furniture of a less durable nature—For the bed: 2 pair of curtains of cotton cloth 6 rs. 2 mattresses filled with cotton 6 rs. 2 quilts 8 rs. 5 pillows stuffed with simul cotton 2 rs. 8 as. 4 sheets 3. 5 coverlets of fine sack cloth (Megili) 1 r. 8 as. 2 blankets from Bootan or Patna 4.—Total 31 rs.

For the floor—2 Satrinj or carpets made of cotton 6 rs. 1 Galicha or carpet of

woollen with both sides alike 3. 1 Dulicha or woollen carpets with a rough nap on one side 3. These three are Muhammedan innovations. 1 pair of large mats made of split reeds (sop) 10 cubits by 2, 2 rs. 8 as.—Total 45 rs. 8 as. Interest and repairs on the above at 36 per cent. 16 rs. 6 as. 5¼ ps. Umbrellas 12 as. Total furniture 40 rs. 13 as.

Ornaments.—For the mistress of the family—A gold ring for the nose (Noth) 8 rs. A string of gold beads (Dana and Mala) for the neck 32. A pair of gold ear rings called Gengtha 16. A golden ornament for the forehead called Tikili 1. A golden ornament for hanging round the neck called Mridonggo Maduli 16.—Total 73 rupees.

Several silver rings for the arms called Bayuti 40 rs. In place of this some wear a pair of silver bracelets called Kongkon 20. And a pair of shell bracelets 5. Silver ornament tied round the arm and called Tar 20. A pair of silver bracelets (Paingchha) made of beads 8. A pair of silver ornaments (Tabij) tied round the arm 6. A silver ring (Loha) for the left wrist 4. 8 silver rings (Chotki and Pasuli) for the toes 5.

For the master of the family—2 gold rings for the fingers 16 rs. 1 or 2 gold ornaments (Madulis) hung round the neck 8.—Total 24 rs.

For the children—2 gold ornaments (Madulis) hung round the neck 8 rs. 4 gold ear rings (Champa) 24. 2 pair silver rings or bracelets for the wrists 16. 2 Silver rings for the neck (Hangsuli) 10. 2 pair of rings for the ancles (Mol) 24= 189.—Total ornaments 262. Interest and new fashioning at 24 per cent. 62 rs. 14 as. 1 ps.

Clothing.—For the master of the family—2 pair of cotton wrappers for the loins (Dhuti) 8 cubits by 2, 6 rs. 4 Phetas or turbans of white muslin 4. 4 cotton sheets, 5 cubits by 3 which he wraps round his shoulders, and which are called Uronis 6. 4 Angrakha and Taj or jackets and caps of cotton cloth 4. 2 pair of slippers 1. 6 common Dhutis or wrappers 21. 1 Jor or pair including wrapper and shoulder cloth 1 r. 8 as. 2 Dolayis or double cotton sheets 5 cubits by 3, 5. 2 Gelaps or sheets for cold weather 10 cubits by 3, 3. 2 Gamochhas or towels 8 as.—Total 34 rs.

For the male relation—4 Dhuties 2 rs. 1 Jor 1 r. 8 as. 2 Gelap 1 r. 8s.—Total 5 rupees.

For the mistress of the family—A silk cloth 10 cubits by 2 which is called Sari 6 rs. 6 cotton Saris 8. 1 Gelap or Chador for the cold weather 1 rs. 8 as. 2 Gamochhas or towels 8 as.—Total 16.

For the widow—5 coarse wrappers (Bhuni) of cotton cloth without red in borders 4 rs. 1 Gelap or chador 1 rs.—Total 5 rs.

For the children—2 pair of Jor 6 rs. 8 Dhutis of cotton 3. 3 chintz coverings for the cold season (Dolayi) 3.—Total 12. Total clothing 72 rs.

Food.—For 8 people, 2 of them children for one month—3 *mans* of good rice at 1 r. 3 rs. 1 *man* of coarse ditto 12 as. 20 sers pulse commonly Thakuri and Oror 8. 8 sers oil (mustard) 1 r. 1½ sers clarified butter not of good quality 8 as. 8 sers salt 1 r. 2 sers sugar 6 as. 5 sers wheaten flour 4. Fish daily 12. Milk from 5 cows 1 r. 8 as. Vegetables and pots 1 r. Black pepper and Mosala or seasoning 8 as. Chira, Murki and Gur, preparations of rice and sugar cane used without being cooked 1 r. Tobacco 8 as. Betel 12 as. Firewood 1 r. 2 as.—Total monthly 14 rs. 8 as. Total annually 174 rs.

Servants.—Wages and clothing—Man 1 r. 4 as. Boy 12 as. Washerman 8. Barber 4. Sweeper 4. Watchman 2 rs.—Total monthly 5 rs. Total annually 60 rupees.

Expence of holidays, ceremonies, Guru, Purohit 80 rs. Small expences of various kinds including stationary and the instruction of of the children in reading and writing 4.—Total 144 rs.

I.—ESTIMATE OF THE EXPENCE OF A FAMILY IN EASY CIRCUMSTANCES. IT CONSISTS OF ONE MAN, ONE WOMAN, TWO CHILDREN, ONE DEPENDANT RELATION, ONE MAN SERVANT, IN ALL SIX PERSONS.

Lodging.—1 hut for the master and mistress with bamboo posts and beams and

mud walls 14 cubits by 7 20 rs. 1 hut for kitchen 8 cubits by 6 10rs. 1 hut for cattle 7 cubits by 5 5. 1 hut for relation and servant 10. 1 shop or 1 hut over the entrance with the fence round the premises 15 =60. Interest and insurance at 36 per cent. 21 rs. 9 as. 7 ps. Ground rent 12 Kathas at 4 rs. Bigah 2 rs. 6 as 5 ps.—Total lodging 24.

Furniture.—For prayer—1 copper cup Koshakoshi 1 r. 8 as. 1 copper cup called Kundo 8 as. 1 copper plate Tat 8. 1 stone for rubbing sandal 3. 1 Kusasan or grass mat 1.—Total furniture for prayer 2 rs. 12 as.

Household furniture of a durable nature—1 brass pot, Kols 4. 3 brass pots, Lota 4 rs. 8 as. 1 bell metal pot, Opkhora 1 r. 8 as. 1 pair betle salves, Panbata 2 rs. 1 betle nut cutter 4 as. 2 brass plates, Thal 2 rs. 2 bell metal plates, Thal 3. 2 brass and 2 bell metal large cups, Bati 3 rs. 8 as. 1 brass lampstand, Pilsoj 12 as. 1 brass boiling pot, Bohuguna 1 rs. 8 as. 1 iron ladle (Nata) and hook (Bayuli) for removing pots from the fire 8 as. 1 iron pot for frying or boiling milk (Khuti) 1 r. 1 hoe (Kodal) 12 as. 1 hatchet (Kural) 6 as. 1 bill for cleaving bamboos (Da) 3 as. 1 Sickle (Kastya) 2. 1 kitchen knife (Bathi) 4. 1 iron rod for cleaning the Hungka 1. 1 knife 3. 1 stake pointed with iron (Khonta) 2. 3 stone plates and 3 stone cups 3 rs. A stone for rubbing curry stuff 8 as. 2 bedsteads 2 rs. 8 as. 1 chest 2 rs. 4 low stools for meals (Piri) 1. 2 wooden platters Barkosh, no pure Hindu can eat out of a wooden platter, although such are much cleaner and better than the vessels of stone. These in use here are not turned, but dug out with chisels and are used as washing tubs, &c. 5. 1 instrument for beating rice (Dengki) and mortar 1 as. 2 wooden instruments (Hungka) for smoking tobacco 4. 2 wooden lamp stands 1. 2 wooden cups for holding red lead 1.—Total durable household furniture 36 rs. 5 as. Total of durable furniture 39 rs. 1 a. Interest and renewing the above at 24 per cent. 9 rs. 5 as. 9 ps.

For the bed—Two mattresses 4 rs. 2 quilts 5. 2 curtains 3. 1 mat of leaves (Sitolpati) 4 as. 4 pillows 2 rs. 4 coverlets of fine sack cloth (Megili) 1 a.—Total 14 rs. 5 as.

For the floor—2 mats of split reeds 8 as. 1 blanket 1 r. 4 as. 1 carpet of cotton (Sutrunji) 2 rs. 1 mat of leaves (Sitolpati) 4 as. The relation and servant sleep on these at night covering themselves with the sackcloth. Interest on the above at 36 per cent. 6 rs. 9 as. 6 ps. Umbrellas 8rs.—Total 16 rs. 7 as.

Ornaments.—For the mistress of the family—1 pair of shell ornaments for the wrist 4 rs. 1 pair of silver bracelets (Painghha) 6. 1 silver ring for the wrist (Loha) 3. 1 silver ring for the neck (Hangsuli) 5. 1 silver maduli hung round the neck 2. 1 pair silver ear rings (Gingtha) 2. 6 silver rings for the toes (Pasuli) 3. 1 gold ring for the nose (Noth) 4. Necklace of red stone or glass beads (Pot Jampola) 3 as. A comb, glass and some boxes for red lead (Sindurchupri) 3 as. —Total 29 rs. 6 as.

For two children—2 pair silver rings for the arm (Bala) 12 rs. 2 silver rings for the neck (Hangsuli) 8. 2 silver ornaments for the neck (Maduli) 4.—Total 24. Total ornaments 53 rs. 6 as. Interest on the above at 24 per cent. 12 rs. 12 as.

Clothes.—For the mistress—1 Sari or wrapper of silk 10 cubits by 2, 4 rs. 6 Saris of cotton with red borders 5. 1 Gelap or sheet for cold weather 10 cubits by 3 1. 2 towels for bathing (Gamochha) 8 as.—Total 10 rs. 8 as.

For the master—2 fine wrappers (Dhutis) for ceremony 2 rs. 8 as. 2 Uronis or shoulder cloths for ceremony 2 rs. 2 turbans 1 r. 8 as. 6 common Dhutis for wrappers 3 rs. 1 Jor or pair, including wrapper and shoulder cloth 1 rs. 2 Gelaps or sheets for cold weather 3. 2 towels 8 as.—Total 13 rs. 8 as.

For the children—2 silk Jor or pair of wrappers for shoulders and loins 4 rs. 4 cotton Jor 2 rs. 8 as. 2 chintz or white Dolayi or quilted wrappers 2.—Total 8 rs. 8 as.

For the relation—5 Dhutis 3 rs. 1 Uroni 12 as. 1 Gelap 1 rs. 4 as.—Total 5 rs. Total clothing 37 rs. 8 as.

Food.—Rice common 2½ *mans* a month at 1 r. 2 rs. 8 as. Pulse (Thakuri and Khesari) 15 sers. 7 as. Oil of Mustard seed 6 sers 12. Salt 4 sers 8. Fish occasionally 12. Clarified butter 1 ser 5. Vegetables and seasoning 1 r. 4 as. Milk and its preparations; interest on the prime cost of 4 cows (16 rs.) at 1 r. per cent. 2 rs. 6¾ as. Food for ditto 1 =1 r. 2 as. 6¾ p. Sugar and sweetmeats and prepared rice

1 r. Betle and tobacco 1. Fuel and potter's ware 1. Part of the fuel used in cow dung collected by the women.—Total per month 10 rs. 10 as. 6¾ ps. Total for the year 127 rs. 14 as. 9 p. Baskets 4 as. Total 128 rs. 2 as. 9 p.

Servant's Wages.—Domestic's wages and clothing at 12 anas per mensem 9 rs. Barber 1 r. 8 as. Washerman 3 rs. Sweeper 1 r. 8 as.—Total 15 rs.
Holiday ceremonies, Guru and Purohit 48 rs.—Total 63 rs.

K.—ESTIMATE OF THE EXPENSE OF THE FAMILY OF AN ARTIST IN EASY CIRCUMSTANCES, CONSISTING OF A MAN AND WIFE, TWO CHILDREN AND ONE WIDOW OR DEPENDENT.

House Rent.—1 hut 10 cubits by 6 of hurdles 10 rs. 1 hut for cooking 6 cubits by 5, 4. 1 hut for the cow 4. 1 small hut for the widow or strangers and a fence made of reeds 6.—Total 24 rs. Interest 35 per cent 8 rs. 10 as. 3 p. Ground rent 10 Kathas at 2 rs. a bigah, being in the suburbs 1 r. Total for lodging 9 rs. 10 as.

Furniture.—Dureable—2 brass water pots (Lota) 2 rs. 1 brass water pot (Opkhora) 1. 1 brass or bell metal plate (Thal) 3. 1 wooden mortar for beating rice 4 as. 2 stone plates and 2 cups 12. A stone for rubbing curry 8. 2 wooden stools for eating (Piri) 2. 2 brass cups (Bati) 1 r. 1 instrument for smoking tobacco Hungka 1.—Total 8 rs. 11 as. Interest and repairs at 24 per cent. 2 rs. 1 a. 3¾ p.
More perishable furniture—2 coarse coverlets of sackcloth (Choti) 4 as. 1 finer (Megili) 4. 3 coarse mats of reeds (Patpati) for sleeping 3. 1 quilt made of old clothes 1 r. 1 quilt made of new cloth 2. 2 curtains 2. 2 pillows 8 as. 2 mattresses made of old clothes quilted together, made by the people themselves. They sleep on these, usually placing them on straw or on a stange made of split bamboos.—Total perishable furniture 6 rs. 3 as. Interest and repair 50 per cent. 3 rs. 1 a. 6 p. Total furniture 5 rs. 2 as.

Ornaments.—For the woman—1 pair shell bracelets 2 rs. 1 pair bell metal bracelets (Paingchha) 8 as. 2 silver ornaments for the neck (Maduli) 8. 1 string of beads (Jampola) 2. 1 pair of silver ear rings (Chaki) 8. 1 pair of another kind (Gengtha) 1 r. A silver ring for the nose 1 r. 1 comb, glass and red lead 2.—Total 5 rs. 12 as.
For the children—2 pair silver rings for the wrists 4 rs. 2 silver ornaments for the neck (Maduli) hung by a string of beads (Jampola) 1 r. 4 as. For the man, a string of Tulosi or wooden beads 1 a.—Total 5 rs. 5 as. Total ornaments 11 rs. 1 a. Interest and repairs at 24 per cent. 2 rs. 10 as.

Clothing.—For the wife—1 fine red bordered cotton wrapper, Sari 1 rs. 8 as. 4 coarse ditto 2 rs. 8 as. In cold weather they wrap an old Sari round them.—Total 4 rs.
For the man—1 fine loin wrapper (Dhuti) 1 r. 1 turban 12 as. 1 Gelap or sheet for his shoulders 1 r. 4 as. 6 loin wrappers (Dhutis, coarse) 2 rs. 2 towels (Gamochhas) 4 as.—Total 5 rs. 4 as.
For the children—2 red bordered Jor or cloths wraped round both loins and shoulders 2 rs. 3 loin wrappers (Dhutis) 2. 2 old chintz quilts not stuffed (Dolayi) 1 r. 8 as.—Total 5 rs. 8 as.
For the widow—4 plain wrappers (Bhuni) 3 rs.—Total clothing 17 rs. 12 as.

Food.—2 *mans* coarse rice at 14 anas 1 r. 12 as. 10 sers pulse (Khesari or Mosur) 3 as. 4 sers salt 7. 5 sers oil 8. Fish, vegetables and seasoning 1 r. Tobacco and betle 8 as. Sugar and rice prepared for eating without being dressed 6. Fire wood, pots and baskets 12.—Total monthly 5 rs. 8 as. Annually 66 rs.
They keep a cow but very seldom use any of the milk, except for a young child on particular occasions. The cow is therefore a source of revenue.

Servants, &c.—Barber 12 as. Ceremonies, Guru, &c. 15 rs.—Total 15 rs. 12 as.

L.—ESTIMATE OF THE ANNUAL EXPENSE OF THE FAMILY OF AN ARTIST, CONSISTING OF ONE MAN, ONE WOMAN AND TWO CHILDREN.

House.—1 hut for sleeping 7 cubits by 5 3 rs. 1 hut, one end for the cow, another for cooking 2 rs.—Total 5 rs. Interest at 35 per cent. 1 r. 12 as. 9½ p. Ground rent of 5 Kathas 8 as. Total lodging 2 rs. 4 as. 9½ p.

Furniture.—Durable—1 brass water pot (Lota) 1 rs. 1 bell metal plate (Thal) 12 as. 1 kitchen knife (Batti) 3. 1 stone plate 4. 1 stone for rubbing curry 2. 1 sickle 1. 1 Kural hatchet 4. 1 instrument for smoking tobacco 1.—Total 2 rs. 11 as. Interest at 24 per cent. 10 as. 3¾ p.

Perishable renewed yearly—3 pieces sack cloth for bedding (Chuti) 6 as. 3 rugs made by themselves of old cloth. 4 bamboo mats, Chatayis 2. 2 pillows of sack cloth stuffed with grass 1.—Total 9 as.

Ornaments.—For the woman—8 brass rings for the wrists (Kharu) 8 as. 1 fine brass ring for the nose 1. 2 brass ear rings 1. 2 brass ornaments suspended from a necklace of wooden beads (Patimala) 1.—Total 11.

For the man—A necklace of Tulosi or wooden beads 1 a.

For the children—4 brass rings for the wrists 4 as. 2 strings of beads (Jampola) and brass Madulis 3.—Total 7 as. Total ornaments 1 r. 3 as. Interest and repair at 24 per cent. 4 as. 6 p.

Clothing.—For the woman—1 red bordered cotton wrapper 10 cubits bp 2 12 as. 4 coarse white wrappers 4 cubits by 2 for common use 12. A rug made of old clothes stitched together for cold weather.—Total 1 r. 8.

For the man—1 loin wrapper, Duthi 8 as. 4 Kaupins, clouts to hide their nakedness 2. 1 sheet for cold weather 4.—Total 14 as.

For the children—4 Kaupins these are made of old clothes but are seldom used. 3 Gelaps for cold weather 1 r.—Total clothing 3 rs. 6 as.

Food.—1¼ *man* of rice at 14 anas 1 rs. 5 as. 12 sers of pulse Khesari or Masur 4 as. 2 sers oil 4. 2 sers salt 4. Seasoning and tobacco 3. Prepared rice, sugar, &c. 3. Fuel they collect themselves. 1 pot and basket 1.—Total monthly 2 rs. 8 as. Total annually 30 rs.

Barber once a month 8 as. Ceremonies, Guru, &c. The sacrifices are the only annual food they procure 6 rs. except what fish they can catch in ditches.—Total 36 rs. 8 as.

M.—ESTIMATE OF THE EXPENSE OF A COMMON LABOURER, HIS FAMILY CONSISTING OF HIS WIFE AND TWO CHILDREN. IF THERE ARE MORE CHILDREN, AS IS OFTEN THE CASE, THE ELDER ONES ARE SUPPORTED BY TENDING CATTLE.

House or Lodging.—1 hut 8 cubits by 6, the man purchases bamboos and cuts the roots of coarse rice straw for thatch and hurdles, which he puts on at leisure hours 9 as. One-third for annual expence 3. Ground rent 4.

Furniture.—Durable—2 stone plates 4 as. 1 Kashtiya or sickle 2. 1 Da or bell 2. Earthen or bamboo pots for drinking water 6 p. 1 Hungka for smoking tobacco 6. To one third for annual charge 3 as.

Perishable—3 pieces of gunny or sack cloth for beading 6 as. 3 rugs made by themselves of their old clothes. Mats and straw pillows for sleeping on 1 as.=7. Renewed yearly, total 10 as.

Ornaments.—Brass rings for the arms of the woman 2 as. 1 ditto for the nose 2 for the ears of ditto 1. 1 string of wooden or stone beads for the man 1. 2 strings of stone beads for the children 1.—Total 5 as. One-third for annual expence 1 as. 8 p.

Cothing.—For the woman—1 large red bordered cotton wrapper, Sari 8 as. 3 small wrappers 8.

For the man.—1 cotton cloth wrapper, Dhuti 5 as. 2 Kaupin 1. 1 sheet for his shoulders in cold weather 4.—Total 13 as.

For the children—4 waist cloth, Kopni, and 2 sheets 12 as. Total 2 rs. 6 as.

Food.—1¼ ser of 96 sw. of coarse rice daily is 13 *mans,* 27½ a year at 12 as. 10 rs. 4 as. 3 p. 1 ser of oil a month at 2 as. 1 r. 8 as. 6 sers a month of Pulse, Khesari or lentils at 2 as. 1 r. 8 as. 1 ser salt 2 as. many however use ashes 1 r. 8as. Pots, baskets, seasoning 6 as. They use no fuel, fish nor vegetables but what they collect Tobacco and betle 1 r. 8 as.—Total 16 rs. 10 as. 3 p.

Holidays, Guru, Purohit and other religious expences 2 rs. Barber once a month 8 as.—Total 22 rs. 10 as.

N.—*A Chronological Series of the Kings, who reigned at Lukhnowtee or Gour Purrooah and Larrah, the ancient capitals of Bengal, from Rajah Lukhmeesey a Hindu Rajah, to Mahomed Akbur Badshah, Emperor of Hindoostan; selected from native historians, commencing with the year of the Hijerah* 510, *or Anno Domini* 1117, *and ending* 973 *Hijerah, corresponding with A.D.* 1566, *embracing a period of* 463 *years.*

Names of Kings.	*Period of Reign.*	*Anno Hijera.*		*Anno Domini.*	
		From	to	From	to
Rae Lukhmeesey	8 years	510	590	1116	1196
Mohummud Bukhtiar	12 years	591	602	1197	1208
Mohummud Sheeran, chief of Omrao Khelj	8 months.	603	603	1209	1209
Uleemurdan Omrao Khelj, surnamed by Sooltan Ulaooddeen	2 years	604	605	1210	1211
SooltanGheasooddeen, alias Mulek Hesamooddeen	12 years	606	617	1212	1223
Sooltan Naserooddeen Muhmood	1 yr. & a few mhs.	618	619	1224	1225
Mulek Ulaoodeen	3 yrs. & a fw. mhs.	620	623	1226	1229
Syfooddeen Uebuk	9 years.	624	632	1230	1238
Uyzooddeen Toghaee Khan	13 ys. & a few ms.	633	646	1239	1252
Kummwroodeen, Lumur Khan	10 years	647	652	1253	1262
Toghrul Khan, surnamed by Sooltan Gheasooddeen	26 years	653	682	1263	1288
Aza Khan, surnamed by Naserooddeen	3 years and a few months.	683	686	1289	1292
Buhadoor Khan, surnamed by Sooltan Noserooddeen Buhadoor Shah	37 years.	687	723	1293	1329
Cuddur Khan	14 years.	724	737	1330	1343
Sooltan Fukhurooddeen, alias Mulek Lukhurooddeen Selahdar	2 years and a few months.	738	740	1344	1346
Uleemobaruk, surnamed by Sooltan Ulaooddeen, Ghory	2 years.	741	742	1347	1348
Mulek Eleeas Bhungera, surnamed by Sooltan Shumsooddeen	16 years	743	758	1349	1364
Secundur Shah, son of Sooltan Shumsooddeen	32 years	759	790	1364	1396
Gheasooddeen	16 years	791	806	1397	1412
Shumsooddeen, alias Syfooddeen	3 years	807	809	1413	1415
Shuhabooddeen	3 years	810	812	1416	1418
Sooltaun Julalooddeen, alias Juddoo Sein	7 years	813	819	1419	1425
Uhmud Shah	3 years	820	822	1426	1428
Naser Shah	27 years	823	849	1429	1455
Barbuk Shah	16 years	850	865	1456	1471
Yoosuf Shah	6 years	866	871	1472	1477

Continuation of the foregoing table.

Names of Kings.	*Period of Reign.*	*Anno Hijerah.*		*Anno Domini.*	
		From	to	From	to
Futteh Shah	7 years	872	878	1478	1484
Khajey Surae	6 months	879	879	1484	1485
Feeroz Shah Ethiopian	3 years	880	882	1486	1488
Mozuffur Shah D.	3 years	883	885.	1489	1491
Hosein Shah, son of Syud Ushrupal Hoseinee	27 years	886	912	1492	1518
Noosrut Shah	23 years	913	935	1519	1541
Feeroz Shah	9 months	936	936	1542	1542
Muhmood Shah	5 years	937	941	1543	1547
Sher Shah	9 years	942	950	1548	1556
Shah Mohummud Khan	1 year	951	951	1557	1557
Buhadoor Shah	6 years	952	957	1558	1563
Buhadoor Shah Julalooddeen	5 years	958	962	1564	1568
Gheasooddeen	18 days	963	963	1569	1569
Taj Khan Ghoorzanee	6 months	963	963	1569	1569
Sooleman Khan Goorzanee, surnamed by Alah Huzzurut	10 years.	964	973	1570	1579

MEMORANDUM.

It was in the 11th year of the reign of Jelaul Doddeen Mohamed *Akbur*, that the kingdom of Gour was finally subdued by the Imperial Arms of the Timooran family. I. E. in the 974th year of the Hijerah corresponding with A.D. 1566 computing the difference between the Solar and Lunar years.

O.—MARKET TOWNS IN DINAJPOOR.

No. I. *Division under Thanah Thakurgram.*—Thakurgram. Kazirhat. Sibgunj. Govindogunj. Nargun. Huldivari. Aladibat. Rupgunj. Mundomala. Pathorghat. Lahari. Adhoyari. Mokabanda. Faravari. Ranigunj. Danggapara. Fakirgunj. Kumburrasul. Rongronggi. Goyora. Baroauliyar.

II. *Thanah Maldeh.*—Maldeh. Murirhat. Nawabgunj. Monggolvati. Shahpoor. Mubarukpoor. Ayiyarhat. Banggavati. Dighirhat. Gojalerhat. Aminahat.

III. *Thanah Potnitola.*—Potnitola. Ranggamati. Maigunj. Kangchon. Katavari. Sibpoor. Suzabol. Deviputro. Sapar. Kasipoor. Guhen. Mosibathan. Chanda. Mahammedpoor. Mudel. Kotol. Gobra. Bhogowanpoor. Munggotiya. Khorida Kasipoor.

IV. *Thanah Badolgachhi.*—Badolgachhi. Prodhan Kundo. Khordnarayonpoor. Sutigunj. Jabaripoor. Kisoregunjs. Goborchapa. Nawabgunj. Deyuli. Bhogowanpoor. Nodikul. Dipgunj. Chanda. Gopalgunj. Sibgunj.

V. *Thanah Lalbazar.*—Lalbazar. Dumdumah. Bakjana. Buksigunj. Sonkoyir. Hilirbazar. Baguan. Belamla. Durgadoho. Joypoor. Mohorula. Thangmali. Jumalgunj. Madargunj. Salijan. Trimohani. Dhurolgangora. Benyapara. Srishti. Monggolvari. Siyala. Mukhma. Kuriya. Khartor.

VI. *Thanah Khyetlal.*—Itakhola. Pirerhat. Sonamukhi. Gutiya.

VII. *Thanah Birgunj.*—Birgunj. Baladanggi. Sonka. Pultoner. Iontya. Pangchpirer. Sotyopirer. Peikerhat. Kachiniarhat. Balirhat. Gondaldihar. Baruyarhat. Khansamagunj. Burarhat. Harirghater. Mathakutar. Ghurnavari. Baroauliyarhat. Iharvari. Devir. Bamonbhita. Chakai. Pirerhat.

Jhongjhoniyar. Bharandar. Machburiel. Prangunj. Taragunj. Rarigunj. Kaharul. Bharuivari. Kurilakiyarhat. Kantonogor. Gurerbazar. Sundorbon.

VIII. *Thanah Chintamon.*—Chintamon. Kathra. Kosbajotbandi. Thangbanggi. Mukhdumhat. Madhobpara. Mahmudpoor. Mrejapoor. Bornogor. Doulutpoor. Khoyervari. Siypoor. Phulvari. Rajarampoor. Baruyi. Benehar. Rudrani. Borotto. Somdiya. Fakirgunj. Anggorchha Mahmudpoor. Ioleswori. Chautha. Pukhor.

IX. *Thanah Potiram.*—Potiram. Nazerpoor. Boton. Molongcha. Akhirer. Dhorli. Tewar. Govindopoor. Hongorgunj. Tara. Borla. Radhanogor. Ramchondropoor. Dullobhpoor. Balurghat.

X. *Thanah Gonggarampoor.*—Dumdumah. Buridangga. Dohapara. Champatoli. Phulbari. Denrati. Now. Kordaho. Bhikahar. Bhalukdoho. Teliyaghata. Srinathpoor. Ampara. Changchra. Mohipoor. Kantavari. Dourgunj.

XI. *Thanah Rajarampoor.*—Kaliyagunj. Lulai. Ranigunj. Bhusi. Pheringgihat. Amdubi. Bilasi. Vagdwar. Birnakungra. Pirerhat. Dangga. Chhobunaseit. Gopalgunj. Aluvari. Kanaivari. Furukabad. Fakirgunj. Birol. Bazilpoor. Polasi. Anondosagar. Sikdargunj. Horintair. Ghughudangga. Thakurani. Sahebgunj. Kaliyagunj. Phulpoor. Taltola.

XII. *Thanah Hawora.*—Ranigunj. Parbotipoor. Kholahti. Gotahar. Gopalgunj. Burirhat. Khyarpukhora. Buksigunj. Burir. Fakirgunj. Uttora. Bhabla. Dhordhora. Kalusaha. Sakarhat. Kaligunj. Joripgunj. Josai. Monggolvari. Huripoor.

XIII. *Thanah Goraghat.* — Jilim. Sahebgunj. Ayaskob. Kengiyagunj. Gumanigunj. Dwaridohor. Panitola. Vindhora. Chhatinchori. Ranigunj. Bologari. Siorvin.

XIV. *Thanah Nawabgunj.*—Nawabgunj. Beparitola. Bhadura. Daudpoor. Kholsi. Pangchgachhi. Hatisala. Belghat. Chanderhat. Fokirerhat.

XV. *Thanah Bongsihari.*—Kalikamora. Besatipara. Korongjo. Kusomvari. Horirampoor. Nawet. Sarai. Mukhdumpoor. Mohipaldighi. Sihol. Berakuti. Kalirhat. Kantason. Brojobollobhpoor. Noypara. Krishnawoti. Kongchivari. Bhadariya. Chonipoor. Koroyi.

XVI. *Thanah Jogodol.*—Jogodol. Bamongola. Paul. Sorunda. Mahaspoor. Pakuya. Kadipoor. Rajnogor. Nalagola. Ranigunj. Delawori. Pirkakat. Bikahar. Detola. Bhoktipoor. Bhanggadighi.

XVI. *Thanah Hemtabad.*—Hemtabad. Munshigunj. Shamspoor. Koyladargga. Burail. Bindol. Bhogoleta. Tajpoor. Pangchbhaiya. Robipoor. Baliyadighi. Rayigunj. Pirgachhi. Daikotvari. Cachimunya. Kholsi.

XVIII. *Thanah Pirgunj.*—Pirgunj. Bongchagunj. Kornayi. Sadamohol. Azulabad. Fakirgunj. Ranigunj. Dana. Beyala. Burigari. Rupgunj.

XIX. *Thanah Purusa.*—Nitpur. Beldohor. Pora. Titolya. Dasnogor. Pataidangga. Nichintapoor. Tilna. Jobayi. Ghatnagor.

XX. *Thanah Kaliyagunj.*—Akhanogor. Dalimgunj. Baidel. Kunor. Saulai. Begungang. Badursir. Sagdhoya. Dhorol. Beragang. Churamon. Khasvari. Ramgunj. Kukuramoni. Pirerhat. Kantavari. Singtore. Delalpoor. Pakuriya.

XXI. *Thanah Ranisongkol.*—Kumargunj. Jogodol. Bedeswori. Sotighata. Fakirgunj. Dhirgunj. Horipoor. Virgor. Kalidangga. Rahutnogor. Songkol. Ramgunj. Syamgunj. Banggola. Rani. Rajvari.

PRINTED BY W. NICOL, PALL-MALL.

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"A publication of much intrinsic value and creditable to Mr. Martin."—*United Service Journal*, April 1838.

"A work of extraordinary merit; to those who are connected with India it will prove of inestimable value. Mr. Martin has displayed his accustomed industry, perseverance and deep research."—*Liverpool Chronicle*, 31st March, 1838.

"The materials collected by this official survey, to which seven years were devoted, and which is computed to have cost 30,000*l*., are of the most valuable kind; and it is matter of extreme regret that they should have so long slumbered in manuscript. Mr. Martin deserves great credit for having brought them from their dormitory in the East India House."—*Asiatic Journal for May*, 1837.